# HiSoft HiWriter VSN 1.3

Developed by Cybernetics Research

Please enter the DATE in the form day/month/year DD/MM/YY

Your SERIAL NUMBER is HiSoft – XXX
You MUST REGISTER with

HiSoft Pty. Ltd.
8-12 Alma Road,
St. Kilda 3182, Australia.
Phone: (03) 534 0383 for Help

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HI WRITER

CONTENTS

1.   <u>INTRODUCTION</u>

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1.1 OVERVIEW

The HiWriter word processing system is designed to be operated
with great flexibility, everything from printing simple
letters to mass mailing of individually tailored letters.
Sophisticated editing and formatting facilities are available
for document processing.

For simple letters and more sophisticated tasks, editing of the
content, and formatting are separated into two steps, thereby
making the operators job easier. Automatic onscreen formatting
is available to check the format of a document before printing.

In summary, HiWriter will perform the following task:

(a) LETTERS

Easy to use.
On Screen editing and formatting.
Full on screen help.

(b) TEST FORMATTING AND REFORMATTING

If the default formatting is not acceptable for your
letter, it can be changed in one simple operation just
before printing by use of the print selection menu or
during editing by the format control commands. The margin,
indent, pitch etc., can be changed just before printing.
A test print can be done, on screen, and the parameters
changed until an acceptable result is obtained. It is not
necessary to reformat the letter each time.

(c) STANDARD LETTERS

Once a letter has been standardised, and the format has been
established, the formatting parameters can be embedded in the
text of the letter so that it is no longer necessary to select
the formatting parameters each time the letter is printed.
The letter can then be saved for future use.

(d) DOCUMENTS

The system is also designed to facilitate sophisticated
document production. Headings, footings, underlining,
subscripts and superscripts, standard paragraphs, table
of contents and, of course, global search and replace
for standard form documents.

(e) MASS MAILING

Form letters can be sent out to selected members of a mailing
list. Each letter is individually formatted by the system,
and thus will appear as if the letter was specially prepared
for the client. Variable paragraphs can be inserted at print
time from the key board.

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To use HiWriter, the operator simple types in the text in
a solid block without worrying about margins or other
refinements until the basic text is finished. Then using
a few simple commands he or she instructs the computer on how
the finished document is to look - and HiWriter does the rest,
working out the number of words to each line, lining up
margins, taking care of every paragrpah indent throughout
the document, deciding when to start a new page, neatly
numbering each page etc. etc. etc. Revisions and corrections
are easily made, without having to retype the whole thing;
often-repeated paragrpahs like your address and the 'Yours
sincerely ...' closing paragraph on letters need only be
typed in once for the rest of your typist's career, and inserted
into each letter with a command from the operator; and HiWriter
can even print out multiple copies of a form-letter correctly
addressed to everyone on your mailing list while the operator
goes out to lunch.

The average typist takes half a day to get used to the basic
concept and operation of HiWriter, and by the end of the
week they'll never touch a typewriter again!

1.2 SYSTEM DESIGN PHILOSOPHY

HiWriter is actually two programs in one. One half of the
program is a text editor (EDIT) and the other (PRINT) a print
formatter. The basic unit of input text is the paragraph.
A paragraph is a stream of characters followed by a carriage
return character. Each paragraph is formatted into
a number of lines. If necessary, a new page is started.

The simplest method of preparing a document is to type up a
sequence of paragraphs using EDIT. This is done by typing each
paragraph without any regard for formatting, and pressing return.

Then PRINT is called up, the default parameters accepted, and
the document printed. Each paragraph will be broken into lines,
and HiWriter calculates the position of line breaks automatically
so that words are not split in half unnecessarily.

The appearance of the printed document can be changed without
modifying the text prepared with EDIT. It is only necessary to
override some of the default parameters during the initialisation
of PRINT.

For example, an indent can be supplied so that the first word
of each paragraph is indented several characters in. Also,
right justification can be specified so that the right hand edge
of each line lines up.

More sophisticated control of the layout of paragraphs is
possible, and is fully explained in this manual. However,
it is not necessary to take advantage of these facilities.

If you wish to, you can tailor the format of each paragraph
to the requirements of the document you are preparing. To do
this usually means that you must plan ahead, and use EDIT to
prepare codes embedded in the actual text to be formatted.

If you are preparing a rather lengthy document with a variety
of formats where the final appearance is critical, then you
will probably wish to take over some of the work normally done
automatically by HiWriter. Further, the formatting parameters
should be embedded directly in the text, so that you do not
have to remember what they are each time your print the document.

The use of two programs to prepare a document or letter, namely
EDIT to type in the content of the letter, and PRINT to format
the letter, makes the task of the system operator much simpler.
This is because you can separate the tasks of getting the
content correct, and getting the format correct.

Unlike some systems, the text does not appear on the screen when
you are editing in the same form as it will when you are
formatting. To some extent, you will have to get used to this
idea. When you are, you should find that much higher
productivity is the result.

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This is because it is not necessary to reformat, remarginate,
repaginate or rehypnenate the text, since it was never typed
in formatted, marginated, paginated or hyphenated in the
first place.

These processes are performed not at the time of typing the
text in, but at the time of printing the letter out. Thus
you can type the letter in once, and test print it on the screen
several times with different formatting parameters, repeating
the process until you like the result. Then you do it again
but this time directing output to the printer.

1.3 HARDWARE REQUIREMENTS

The HiWriter word processing package is designed to run on
the following hardware:

Computer   : Hitachi MB-6890 'Peach'.

Screen   : Hitachi C14-2170 RGB colour monitor.

Printer   : Diablo 630 letter quality printer.

Memory   : 40K RAM, 8K RAM expansion required.

Disk   : HiWriter is configured to operate
                       on the following drive formats:

                       5¼", either single sided single density
                       or double sided double density
                       8" double sided double density

                       N.B. A HiWriter system disk will only
                       operate on the particular format configured.

However, alternate hardware may be used as follows:

Screen   : an alternate high resolution RGB monitor
                       with long persistence phosphor may be used;

                    : a high resolution green phosphor monitor
                       may be also be used, colour information is
                       displayed as different shades.

Printer   : any Diablo compatible letter quality printer
                       may be used.

                       any printer with an RS-232C serial, or
                       Centronics standard parallel interface may
                       be connected to the system and used
                       successfully with HiWriter, however, lack
                       of particular facilities on your printer
                       may restrict your use of certain features
                       of the package, as listed below:

                       (a) an independent carriage return and
                           line feed control is required for
                           underlining.
                       (b) backspace capability is required for
                           bolding and overprinting
                       (c) diablo hiterm with compatible interface
                           is required for superscripts and sub-
                           scripts, proportional word spacing,
                           adjustable pitch and line spacing.

Disk   : any Hitachi compatible Drive.

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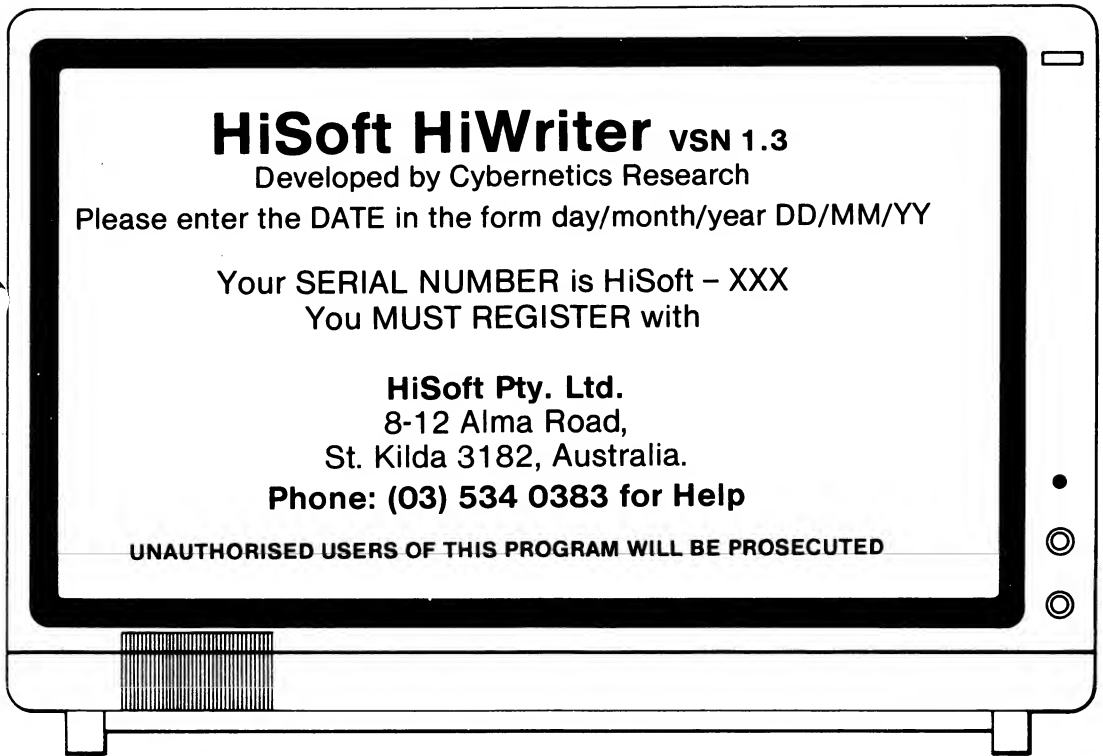
1.4 <u>START UP</u>

(a) Ensure that all components are correctly connected
(refer to the relevant hardware manuals for direction).
Switch power on to all components.

(b) Insert the HiWriter Program Disk into Drive 0 and formatted
Data Disk into Drive 1 (to format and initialize a Data Disk,
refer to Filer Section). If there are any problems contact
your HiSoft dealer to demonstrate this operation for you.

(c) Type NEWON 15. The screen will temporarily go blank
and the Microsoft Disk Basic Display will then appear briefly.

The above screen will then appear.

(d) Insert the date in the form DD/MM/YY. e.g. 30/12/82

(e) The system will then display the correct day and date in
full (e.g. Thursday, 30th December, 1982) and then you enter
Y or N to verify the date. If N is pressed, the system will
go back to (d).

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36000 free on drive 1 : SAMPLE TEXT FILES

POEM   LETTER   MAIL   FLYER   NOTES # 1 APPENDIX CONTENTS

INDEX   HTEXT   POEM2   TEST1.2   TEST1.1

CREATE   EDIT   RECOVER PRINT   MAIL   FILER   CATALOG

Use ↕ in position Cursor, RETURN to select Action or File

12/05/82
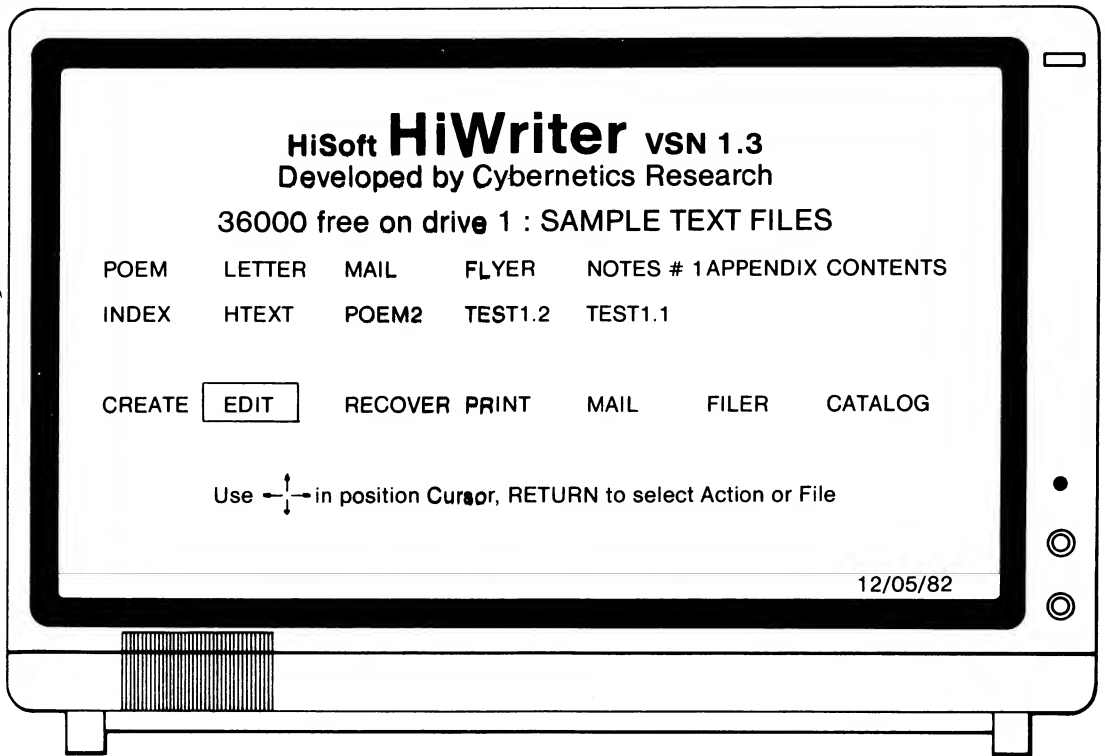
If Y is pressed, the system will then display as above:

(f)   The system is then ready for use. Turn to the appropriate
      section of the manual for further information.

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2. TUTORIAL

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2.1 TUTORIAL OUTLINE

This Tutorial outlines the basic capabilities of the HiWriter word processing system. It has been written specifically for Users who have never had experience with either word processors or computers, with none of the technical jargon encountered in many computer manuals.

It is recommended that you first use this section to train yourself in the basic functions. This tutorial has been designed to present as simply as possible the operations you will definitely need.

Allow yourself three solid, uninterrupted hours to work through the tutorial, at the end of which you will be fully acquainted with all the moves necessary to produce, from initial entry to final printed copy -

. letters and correspondence

. essays, minutes, memos, theses, specifications, and other sophisticated documents

. mailing lists and mass-mailed form letters

i.e. all of your word processing applications.

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36000 free on drive 1 : SAMPLE TEXT FILES

POEM   LETTER   MAIL   FLYER   NOTES # 1 APPENDIX CONTENTS

INDEX   HTEXT   POEM2   TEST1.2   TEST1.1

CREATE | EDIT | RECOVER PRINT   MAIL   FILER   CATALOG

Use ←↕→ in position Cursor, RETURN to select Action or File

12/05/82
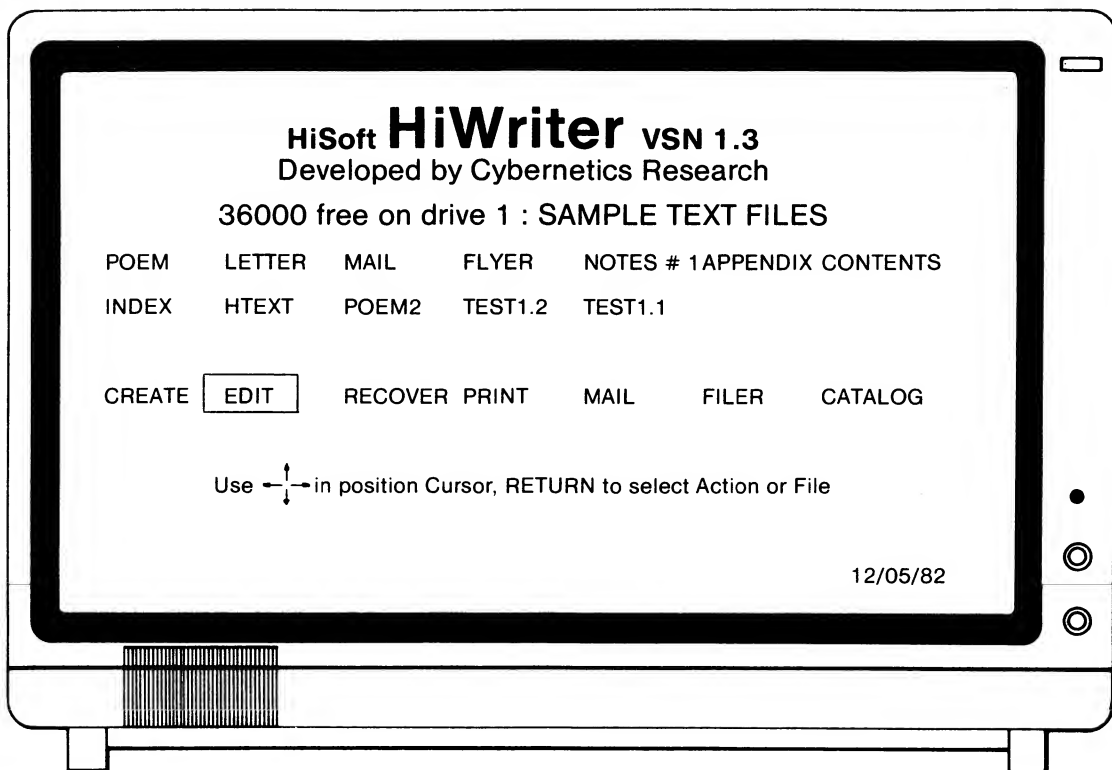
2.2   START UP

      To start the system up refer to section 1.4 after which
      the above display will appear.

      This type of screen display - a list of possible functions -
      is called a MENU, probably because it is just like a
      restaurant menu - it gives you a list to choose from.

      The first screen menu allows you to choose one of the
      functions [CREATE, EDIT, RECOVER, PRINT, MAIL, FILER, CATALOG
      in conjunction with one of the files on your work disk.

      We will now CREATE a practice file together with you. Use
      the left arrow (←) to light up the CREATE option, and hit
      RETURN. Next type in the name for this new file (up to a
      limit of 8 characters) Hit RETURN again, and answer Y to
      the next question. (This question offers you a last
      chance to change your mind).

      After a couple of seconds you will see two lines appear
      onscreen, marking TOP OF TEXT and BOTTOM OF TEXT.

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```
┌──────┐    ┌─────┐ ┌─────┐ ┌─────┐ ┌─────┐ ┌─────┐          ┌────┬───┬───┬────┐
│BREAK │    │ PF1 │ │ PF2 │ │ PF3 │ │ PF4 │ │ PF5 │          │HOME│ ↑ │ ? │INS │
└──────┘    └─────┘ └─────┘ └─────┘ └─────┘ └─────┘          │CLS │   │   │DEL │
                                                              ├────┼───┼───┼────┤
┌───┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬──┬───┐              │ ←  │ ↓ │ → │ /  │
│ESC│! │" │# │$ │% │& │' │( │) │0 │= │^ │¥ │INS│              ├────┼───┼───┼────┤
│   │1 │2 │3 │4 │5 │6 │7 │8 │9 │  │_ │  │  │DEL│              │ 7  │ 8 │ 9 │ *  │
├────┬──┴┬─┴┬─┴┬─┴┬─┴┬─┴┬─┴┬─┴┬─┴┬─┴┬─┴┬──┴───┤              ├────┼───┼───┼────┤
│CTRL│ Q │ W│ E│ R│ T│ Y│ U│ I│ O│ P│ @│  [ │RETURN│          │ 4  │ 5 │ 6 │ −  │
├─────┴┬──┴┬─┴┬─┴┬─┴┬─┴┬─┴┬─┴┬─┴┬─┴┬─┴─┬────┐ │          ├────┼───┼───┼────┤
│CAPS  │ A │ S│ D│ F│ G│ H│ J│ K│ L│ + │ * │] │GRAPH│      │ 1  │ 2 │ 3 │ +  │
│LOCK  │   │  │  │  │  │  │  │  │  │ ; │ : │  │     │      ├────┴┬──┴─┬─┴───┤
├──────┴┬──┴┬─┴┬─┴┬─┴┬─┴┬─┴┬─┴─┬───┬───┬─────┤      │ 0   │ .  │RETURN│
│ SHIFT │ Z │ X│ C│ V│ B│ N│ M│ , │ . │ ? │SHIFT │      └─────┴────┴─────┘
│       │   │  │  │  │  │  │  │ ' │ ` │ / │      │
└───────┴───┴──┴──┴──┴──┴──┴──┴───┴───┴──────┘
          ┌─────────────────────────────┐
          │                             │
          └─────────────────────────────┘
```
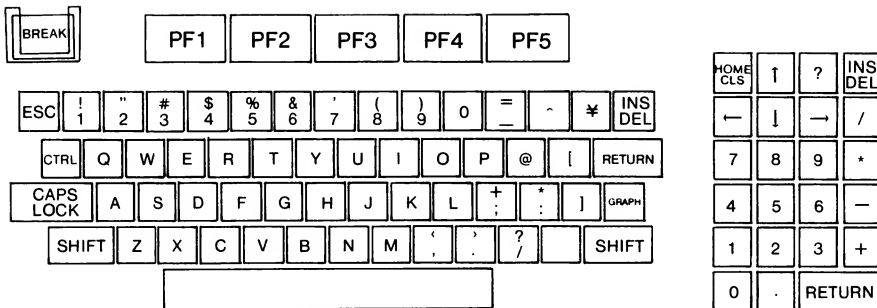
2.3   THE KEYBOARD - A GUIDED TOUR

If you are a typist, you will already be familiar with the
positions of the alphabetic characters, punctuation marks,
SHIFT (uppercase) keys, CAPS LOCK, the row of numbers on the
top of the alpha keys, and most of the special characters. If
you're not a typist, try and locate all of these. Punctuation
includes ! " ' : ; - ? , .   The special characters usually
found on a modern typewriter are # $ % & ( ) = @ [ ] + / and
*. The SHIFT key is used for the top line of a dual-purpose
key (e.g. 7/', HOME/CLS) or to produce upper or lower
case characters. It must be held down as you hit the required
key. CAPS LOCK produces the same effect without having to hold
down two keys. When the light next to CAPS LOCK is on, it means
you'll get lower case letters. When you've finished with CAPS
LOCK hit it again. This effectively "converts" the keyboard
into a normal typewriter mode, if you press the SHIFT Key capitals
are displayed. If the CAPS LOCK light is off then upper case
is displayed. If you press the SHIFT Key the lower case is
displayed.

Try out a few of the special character keys, using SHIFT and
CAPS LOCK, until you feel comfortable with the keyboard
The only function keys we need now are RETURN - which takes
you down one screen line - and DEL - which erases text to
the left.

Keep playing with the keyboard until you are ready to do a
serious piece of data entry.

2.4 TYPING IN YOUR FIRST DOCUMENT

Now type in one paragraph - starting on the left-hand edge
of the screen without worrying about margins. The text
on the screen will look like this paragraph - just a big
untidy block of text. Hit RETURN only at the end of the
paragraph, not at the end of each   sentence as in typing,
and then look at the screen. If you have typed enough text in,
you will notice some words appear to be broken in half at the
right-hand margin; this is because you are not given a
formatted [1] display until you ask for it to save screen space.
Let us format the display to see the difference.

2.4.1 Formatting

For on-screen formatting instructions use the ESC function key -
locate it before we start. (The instructions themselves do not
appear onscreen as you type them.)

[If there is a possibility you might change the format every
time you print this document you can leave these commands out
(you have another chance to format when you pick the PRINT
option - described below in section 2.7). If you do use these
ESC commands they will override the values entered at the
PRINT stage).

Now - we will set a line width of 80^2. Type ESC 80 W
which sets the right-hand edge of the text 80 characters
(including spaces!) from the left-hand edge of the page.
Now - a margin of about 10 characters from the left-hand
edge looks OK - so type ESC 10 M. We will also use a
paragraph indent of 5 - so type ESC 5 N. And finally we will
make sure we have a neat right-hand edge by typing ESC J (for
JUSTIFY [3]).

Now type in another nice fat paragraph of about six screen lin·
still starting from the left-hand edge of the screen and
remembering that you hit RETURN only at the end of a
paragraph.

Ready to format? Hit ESC F (for format). Wasn't that easy!

1 Formatting is setting margins, indents etc. to produce   a professional-
   looking effect on the page.

2 This is the limit onscreen at one time. It is quite possible to set
   widths larger than 80 characters if your printer will print them - see
   under WIDTH and COLUMN in later sections.

3 JUSTIFY simply means lining up the right-hand ends of every line
   to make a straight print edge.

Try some other formats until you find the combination you prefer.   Remember:

ONSCREEN FORMAT
width   = ESC (type a number) W
margin   = ESC (type a number) M
indent   = ESC (type a number) N
justify = ESC J

Justify does not need a number; the first time you use it, the right-hand edge will be straight. (This is called RIGHT JUSTIFICATION.   LEFT JUSTIFICATION is already taken care of at the margin.)   If you like it straight, that is the only time you have to use ESC J right throughout the document.   If you prefer a ragged, typewriter effect another ESC J will turn off the neat edge (or more simply leave out the ESC J instruction in the first place.)

Hit ESC F again to return to unformatted display.

Having become expert formatters by this stage we will move right along to erasing those embarrassing typing errors we have probably accumulated by now.

2.4.2   THE CURSOR

The cursor is that little square zipping round the screen that indicates the current text entry position.

Moving the Cursor Around the Text

At this point we will introduce you to the CTRL key. Like the SHIFT key, it is used in conjunction with another key and must be held down as you hit the required key.

For example, to skip the cursor back up to the Top of text, use CTRL T.   If you did it right, there you are.   (If you were not holding down CTRL when you hit T, then logically all you got was T.)   Now try CTRL E - and zap, you are taken instantly to the End of text.   CTRL T for Top, CTRL E for end.

Find your arrow keys (on top of the numeric keypad on the right).   The left arrow (←) and right arrow (→) move the cursor around exactly as you would expect, character by character.   Hold any of them down and you go whizzing around the text in that direction until you release it again.   (This feature is called AUTO-REPEAT by the way - every character key, and DEL, will AUTO-REPEAT as well.)   Up arrow (↑) and down arrow (↓) skip the cursor up and down respectively paragraph by paragraph.

(a)   INSERTING TEXT

If you wish to INSERT something in the text, arrow your way
to the right place and simply type it in.   The text that
was there already will simply move over to make room.

(b)   DELETING TEXT

If you wish to DELETE something you have several options
but the simplest way is to use your DEL key which you have
toyed with already.   Use the arrows to skip to the right spot,
and then DEL backwards.   (Remember holding the DEL key down
repeats the delete until you release it again.)   Because of
the fast response, you can delete this way at about 200 words
a minute - five times average typing speed in fact - which
is quite adequate.

(c)   UN-DELETE - for overenthusiastic deletions

If you DELETE too far, CTRL W will restore the last character
you deleted.   In fact if you hit CTRL W enough times, you
restore the entire passage you just DELETED.   Isn't modern
technology wonderful?

If you accidentally hit CTRL and A at the same time (which
deletes a paragraph left of the cursor), CTRL W will also
restore this.

2.5 SPECIAL EFFECTS

2.5.1 Underlining

Underlining is created by inserting the underline on character (S0) where you want the underline to start and underline off (S1) where you want the underline to stop. Underlining can also be switched off by hitting RETURN.

CTRL Z is always used to "embed" these special characters in your text. Therefore:

        Underline on   = CTRL Z   CTRL N
        Underline off = CTRL Z   CTRL O (or RETURN)

Underline shows up in red onscreen in a formatted display.

2.5.2 Forcing a Line to the Right-Hand Edge

Used mainly for dates and addresses on letterheads. As it is possible to change width, margins etc. every time you reprint a document if necessary, it is better to use the TILDE *' character (super-soft space) rather than trying to guess the number of spaces needed to position the line correctly. TILDE is an expandable (super-soft) space character which automatically calculates and inserts the number of spaces necessary for the effect you want and appears on the screen as a little squiggle (∿) when the PF1 key at the top of the keyboard is pressed.

2.5.3 CENTERING A LINE

Centering a line is done by typing @CENTRE on the left-hand margin and then whatever you want in the line.

This heading was done this way:

@CENTRE CTRL Z CTRL N HEADING CTRL Z CTRL O
(CENTRE command-UNDERLINE on-CAPS LOCK for heading-UNDERLINE off)

2.5.4 Bolding

As in underlining, pick the spot you want to start bolding (bolding produces a darker effect by printing every character twice over.)

        Bolding on   = CTRL Z CTRL B
        Bolding off = CTRL Z CTRL O

Return will also switch bolding off.

1 TILDE is pronounced TILDA

2.5.5   Resetting Margins Temporarily

> If you suddenly want a paragraph to
> look like this in the middle of the
> text, space across to where you want the
> left edge to start and embed CTRL Z CTRL
> K in the text to set a left margin for
> that paragraph only. CTRL Z CTRL E sets
> a right margin for that paragraph only.

Alternatively, you can reset formats by using the @
commands – margin, width, indent, justification, spacing,
and pitch can all be changed anywhere within a document.*

2.5.6   Tabs, Tab Settings and Tabulation Generally

To see the TABS already set for you, hit ESC T. (This
also gives you other interesting information: For full
explanation see Section 7.6 of this manual.)

Skip right to next tab   =   CTRL I
Skip left to next tab   =   CTRL N

If you do not like current tabs, or want to set extra
ones, ESC I will either erase the tab the cursor is on,
or set a tab if there is not one there.

ESC T again will return you to normal screen.

2.5.7   Inserting Date, Time and Page Numbering

To insert date and time lines into your text you first
need to set the system date and time every morning using
the SETDATE command in the FILER utility.

```
         *** HIWRITER Edit Menu ***

         Select an action by number:

         0 .................. Quit

         1 ................. Edit

         2 ............. Load POEM

         3 ............. Save POEM

         4 ........... Print POEM

         5 Change default file name

                   Which?
```
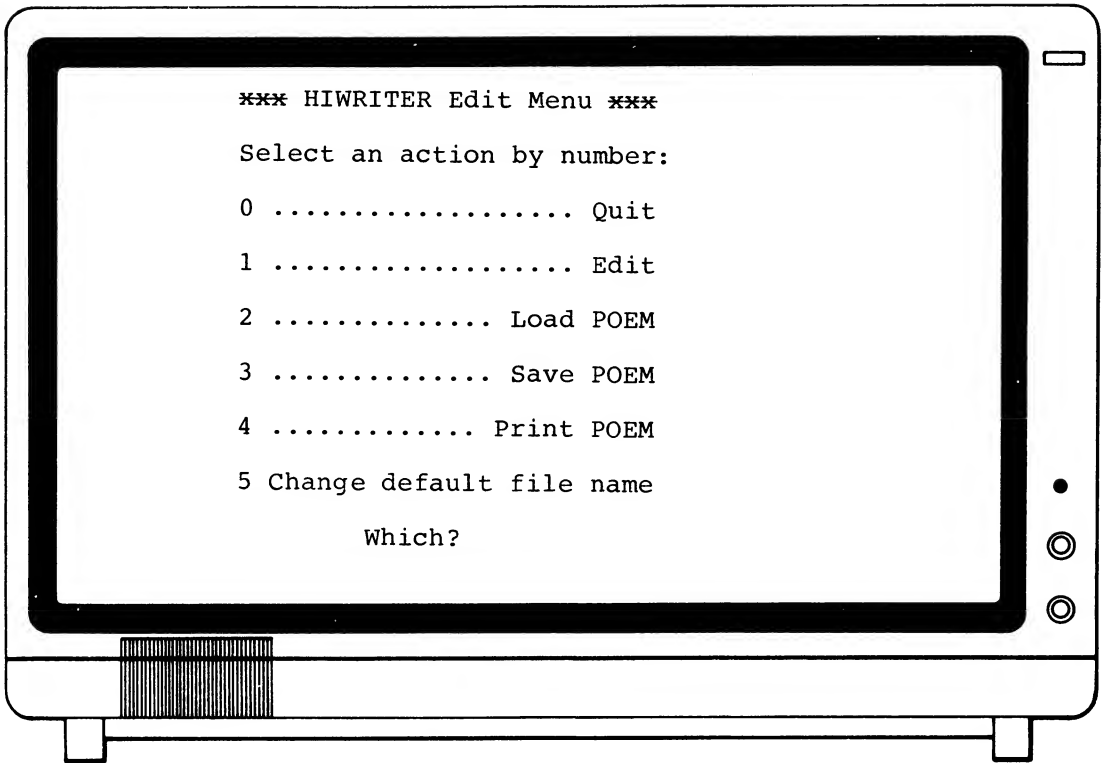
2.6   SAVING YOUR FILE TO DISK

Believe it or not, all this work will disappear into thin
air unless you save it onto disk. Feel free to rehearse some
more if you like: but when you wish to preserve this file for
posterity, hit ESC X (for exit).

This produces the second menu - options which instruct your
system what to do with the file you have been working on.

The screen will display as above:

Note the way you pick options by number.

These options are -

0 - <u>does not save</u> file - returns to first menu.

1 - edit - <u>does not</u> save file - returns to text.

2 - load - <u>does not</u> save file but loads into it either:
       (a)   another file on this disk   or
       (b)   another copy of this file.

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3 - saves file

4 - print - gets <u>ready</u> to print the file and saves it all in
    one

5 - change file name. <u>Does not save</u> but allows you to
    (a) change the name <u>of this file</u>   or
    (b) nominate another file on this disk to be added into
        it.

```
                    ✗✗✗ Print POEM ✗✗✗

Page heading

Page footing


     Form length      66        No. of copies      1
     Page length      60        First page No.     1
     Page width       60        Last page No.      999
     Margin width     20        Print every        1
     Para. indent     7         Single sheet       N
     Right justify    Y         Selective mailing  N

     Output to Screen Printer or Both (S,P,B)    S
     Pitch            10
     Spacing          6
              ↑
     Use ←   → to position Cursor, RETURN terminate Data
              ↓  Entry, ESC to Exit, PF2 to Print,
                 PF3 to Edit
```
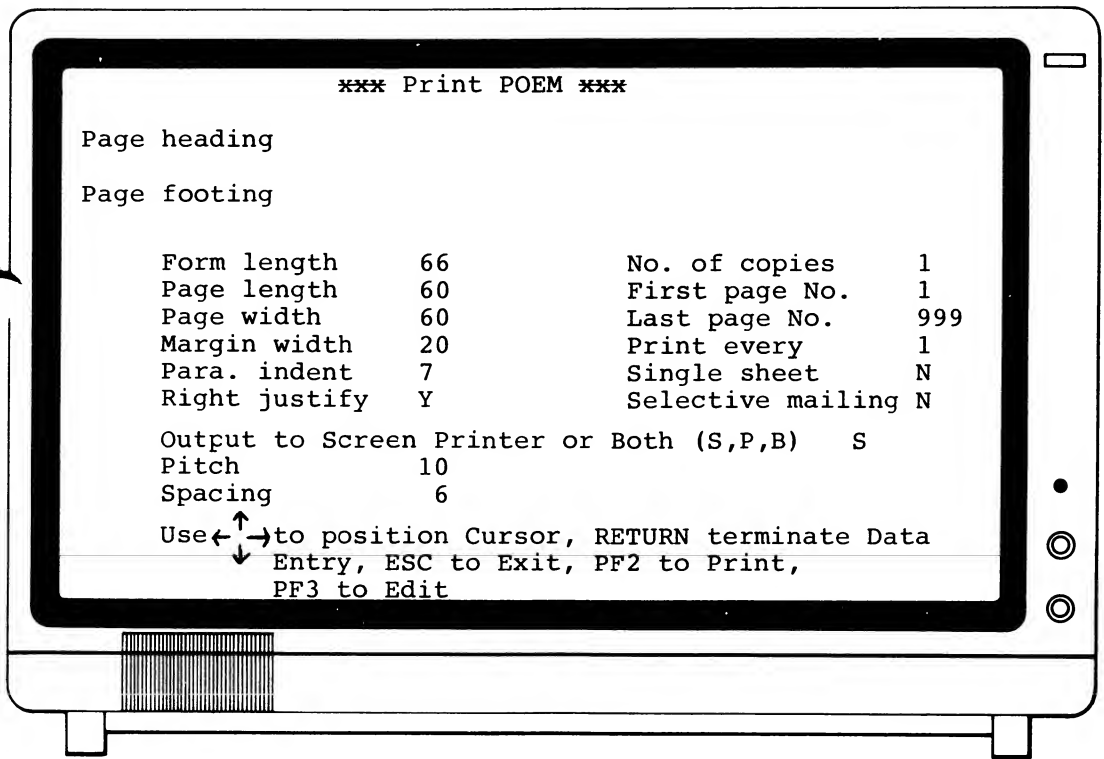
2.7   PRINTING

We will presume at this stage you want to print your file.
Pick 4, then Y. This will produce onscreen the PRINT menu.
(If you have already saved a file previously, you can go
directly into PRINT from the first menu, where PRINT is
listed as a function).

The Print Menu looks as above:

We will take these different options from the PRINT menu
(called parameters just to be technical for a change) one
by one.

To skip any of these parameters (if you do not wish to change
them) use RETURN. If you wish to change anything type in
the correction and then move on to the next one with RETURN.
To go back a line use left arrow.

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PAGE HEADING   -   if you want any sort of heading to appear
                        on each page type it in here. (One line only
                        please.) One blank line will be left
                        underneath each heading automatically to
                        separate it from the rest of the text.[1]

PAGE FOOTING   -   will do exactly the same thing except as a
                        bottom line for each page, with one blank
                        line separating it from the rest of the text.

FORM LENGTH   -   number or print lines possible on each page of
                        the paper you are using. Most continuous paper
                        is 66 print lines long.

PAGE LENGTH   -   number of print lines you want to use on each
                        page (up to a maximum of Form Length of course).
                        We suggest this be set to Form Length minus 6 to
                        leave a few blank lines at the top and bottom of
                        the form - it looks neater.

MARGIN WIDTH   -   if you have already set MARGIN inside your text
                        do not bother with it here. If you have left
                        it out of your text - pick a number; pick zero if
                        you like.

PARAGRAPH INDENT -   same with this. If it is already in your text
                        do not worry; if it is not in your text, pick
                        a number here. (You can pick 0 if you like,
                        which gives you no indent).

RIGH JUSTIFY   -   this is also optional, depending on whether you
                        set it in the text or not. If you left it till
                        now, you have a choice of either Y or N (for Yes
                        or No).

NO. OF COPIES   -   nice plain English

[1]   If you want automatic page numbering as a heading on the right hand edge
      of page, type in PF1 (for TILDE) Page^P in the HEADING line - if you want
      the page number centered as a footing, type @CN -^- P- in the FOOTING.
      This will automatically centre each page number at the foot of the page
      between decorative - characters.

FIRST PAGE NO. - likewise: pick the last page you want to
                print up to.

PRINT EVERY   - usually you skip this one, but it allows
                you to print every second, third or 99th
                page if you so desire. (Useful for manuals
                where you want to print the even page
                numbers on one side of the page and the odds
                on the other. Print all the evens first -
                First page no = 2, Print every 2 - then turn
                the paper over and print odds - First page no
                = 1, Print every 2.

SINGLE SHEET   - stops the print at the beginning of each
                new page, so you can check it as you go if
                necessary.

SELECTIVE
MAILING   - used with the MAIL function, to allow you to
                check every address one by one on the mailing
                list to see if you really want to send everyone
                this letter or not. A response of Y gives you
                this option; a response of N goes ahead and
                prints everyone a letter (see Section 6.2 for
                further details).

OUTPUT TO SCREEN,
PRINTER OR BOTH
(S,P,B)   - exactly what it says. It is possible (and a
                good idea) to print the file to the screen only
                so you can see if you like the format before
                wasting any paper.

PITCH   - is the number of characters horizontally to the
                inch. 10 is fine for most applications.

SPACING   - is the number of lines vertically to the inch.
                6 gives you standard single spacing. (3 gives
                double spacing, but remember to change the Form
                and Page length to allow for this - if you are
                doing double spaced lines, the Form length will
                be half the number of print lines to what you
                had for single spacing, and so will the Page
                length.)

The bottom of the screen gives you the final options for this
menu - ESC exits to the first menu without doing anything,
PF2 starts the print, and PF3 takes you back into the file
in case you forgot something (in which case you will have to
resave the new version.) Select PF2 to print, and see what you
get.

2.8 MASS MAILING

This enables you to combine a form letter with a mailfile.

First you need a mail file containing your mailing list.
You can set up each address any way you like, but we recommend
this way:

Name (for use in Dear Mr. Smith situations) and RETURN
Business name (if applicable) and RETURN
Full name (for addressing letter) and RETURN
Address line 1 and RETURN
Address line 2 and RETURN
Phone number (for your personal reference) and RETURN
Special interests (also for your personal reference) and
   RETURN.

∧

(This character tells the computer where each person's
 record ends.)

If you do not have full details on everybody, you must
leave a blank line (with RETURN) so that every address has the
same number of lines in it.

When you have a few sample addresses in, save your file
as per normal, (ESC X, 3, Y).

Now CREATE a file called FORMLETTER, and type in some sort
of form letter; Christmas greetings, notice of overdue
account, or whatever. Whenever you get to something that can
be inserted from your mail file, simply type in the line
number (e.g. Dear 1). HIWRITER will automatically shuffle the
text of the form letter around each insertion at print time
so there are no ungraceful gaps.

When you go to print, pick MAIL from the first menu; specify
the form letter file first, and then the mail file: and select
formatting parameters as per normal. If you wish to send
a copy to everyone on your mailing list, for the SELECTIVE
MAILING line put N; if you put Y here each address will
come up onscreen so you can decide whether to print it -
with a Y response - or skip it - with a N response.

2.9 SAMPLE

HELLO!

Here we have a sample page using a heading and a footing. If this sample was more than one page these would appear on every page.

Form length (if you'd like to count them up) is 30 maximum print lines on paper this size (I'm using double spacing). Page length I've set to 34 to leave a neat blank border on the top and the bottom of each page. Remember a heading will take up 2 print lines (heading plus one blank line) and so will a footing. I've set the MARGIN at 15, INDENT 5 and WIDTH 80 (including the 15 spaces for the margin). I said Y for RIGHT JUSTIFY because I prefer this neat right hand edge. (To get this edge right, my printer - a DIABLO 630 - stretches out each word equally to fill up every line exactly. This is called PROPORTIONAL SPACING. Some printers line up the right hand edge by only stretching out the spaces between words - this is called BLANK PADDING and doesn't look quite as neat.)

PITCH is 12 - that is 12 characters to the inch across the page: and SPACING is 3 - that is 3 print lines to the inch down the page.

Now try out the sample letter exercise on page 21, and test out different settings; another setting you can try is MARGIN 20, WIDTH 50 and INDENT 0, for example. Figure out the format you think looks best for whatever you're doing.

DID YOU READ EVERY WORD?

2.10   TUTORIAL REVIEW

Here is a summary of everything covered in this tutorial.

MOVING THE CURSOR AROUND: Use the arrows. If you want to
                               skip to the Top of the text hit
                               CTRL T: if you want to skip to
                               the End of the text hit CTRL E.

INSERTING TEXT   Use the arrows to get to the
                               right place, and just type it in.

DELETING: Use the arrows to get to the
                               right place and use the DEL key
                               to delete backwards.

UNDELETING (RESTORING):   If you delete too far CTRL W will
                               restore the characters you
                               deleted one by one.

UNDERLINING: On CTRL Z CTRL N
                               Off CTRL Z CTRL O (or RETURN)

CENTERING A LINE: On the left-hand margin, type
                               @CENTRE and then whatever you
                               want to print on the line.

FORCING A LINE TO THE RIGHT: Hit PF1 and type the line, then
                               hit RETURN. (Remember PF1
                               produces an 'elastic' space).

ON-SCREEN FORMATTING: ESC number M to set margin.
                               ESC number W to set width.
                               ESC number I to set indent.
                               ESC J to start justification.

                               (These will override the PRINT
                               menu values if you insert them
                               while you are typing in text).

PRINT FORMATTING-AT PRINT
TIME: Just type the numbers you want
                               for each setting into the PRINT
                               menu (if you have not already
                               set them in the text.)

TABULATION (TAB FOR SHORT):   Skip one tab right CTRL I
                               Skip one tab left CTRL N
                               Erase or set tab ESC I

```
LOOK AT STATUS INFORMATION:        (tab settings, size of current text,
                                    size of free space, current format)
                                   ESC T

EXITING A FILE:                    ESC X

BOLDING:                           On CTRL Z CTRL B
                                   Off CTRL Z CTRL O (or RETURN)

PRINTING:                          Select PRINT option and follow
                                   the menu.
```

2.11   PRACTICE EXERCISE

Now you are going to produce a letter to yourself, using everything you might possibly need.

First, CREATE a file called LETRFMAT. This will contain the standard address, date and Yours sincerely etc. parts of a standard letter, as well as the instructions for the standard double-spaced letter format. You can then use this file for every letter you ever type - i.e. this is the only time you will ever have to type these repetitive paragraphs ever again.

Insert the @ format commands you have decided to use with letters. Remember to set @SPACING 3 for double spacing.

Then, type in your address - remembering to put a TILDE (with PF1) on the left-hand edge of each line if you want your address to appear over on the right-hand side, which is standard practice for business letters. Then type in TILDE (with PF1) and the date, to print today's date underneath the address.

Hit RETURN to leave a blank space between this heading and the text of the letter.

The standard way of ending a letter is:

At the left-hand margin, type @CN Yours sincerely, and RETURN.

Next, do three RETURNs to leave room for a signature. Then at the left-hand margin type @CENTRE and you name, and RETURN. @CENTRE again, and type in your job title, or simply the company name. Have a look at the last page in this tutorial to get an idea of what it is supposed to look like.

This file now contains all the boring bits that will be standard for all your letters. Save it as per normal with ESC X, 3, Y.

Now, if you didnot make up a mail file before under the MASS MAILING section of this tutorial go back and create one according to the instructions; save it and come back here.

Now for your practice letter. EDIT your LETRFMAT file to save yourself typing; insert the date in the proper place; arrow your way to the middle and type in your letter. It can be Christmas greetings, notice of overdue account, anything at all. Whenever you get to something that can be inserted from your mail file, simply type ^ and the line number (e.g. Dear ^1,). HIWRITER will automatically shuffle the text of the form letter around each insertion at print time so there are no ungraceful gaps.

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When you have finished typing in the letter, ESC X. At this
stage we are going to change the name of this file and THEN
save it - this means that you still have the format, beginning
and end of the standard letter safely stored under the name of
LETRFMAT as well as having this version saved under a new name.
Use filenames that describe the content of each file - for
example if you have just written a Christmas letter, call
it something like XMASLETR; if is is a letter about overdue
accounts call it something like DEBTLETR.

So, to rename the file you have just been concocting, pick
option 5 - change default filename. Type in the new name,
and Y, and then pick option 3. When you return to the first
menu you will see both your letter outline file - LETRFMAT - and
the new filename now exist on your work disk.

To print a text which has references to a mail file in it,
pick the option MAIL. This will ask you first for the name of
the file containing the letter, and then for the name of the
mail file you wish to use. Type these in and then proceed to
the PRINT menu.

Only one line in the PRINT menu directly refers to this form
letter-mail file merge operation, and that is SELECTIVE
MAILING. If you want to send this letter to everyone in the
mail file, leave this as N; but if you want to select certain
addresses as you print pick Y and each address will come up
onscreen. Simply respond Y or N, depending on whether this
person should get a copy of the letter or not.

Run over to your printer, and admire each letter as it prints.

2.12   PRINTING ADDRESS LABELS

To print address labels, all you need is the mailing file you
have already set up, and a letter file containing the
instructions for single spacing and setting a form length
of 9 (this is the number of lines on the average continuous
label stationery.)   The rest of the letter file simply says:

    ^2
    ^ 3
    ^4 .

or whatever lines of the mailing list you want to use to
address the envelope.

Line up the printer on the first line of each label, and print
as per normal.

Well, that is just about the lot.   You can now consider yourself
an experienced word processing operator - and after only one lesson!

There are many more functions available, all of which are outlined
in the remaining sections of this manual.   The most useful ones for
the next step in your training are: SEARCH and REPLACE (see section
3.11), full details on MERGING, which covers merging files and
keyboard data (see section 6).

Remember the USER HELP is a useful onscreen summary of available
functions. (Section 3.13)

If you have any further queries, suggestions or comments, please
let us know.

                    Regards,

                    HISOFT PTY. LTD.
                    8-12 ALMA ROAD,
   ST. KILDA, VIC. 3182
                    (03) 534 0383

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3. EDITING

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3.1 EDITING OVERVIEW

The Edit Module of HiWriter is an <u>advanced</u> text editing program
for use on your microcomputer. Conceptually, EDIT provides the
User with a 'window' through which the User can view and modify
a text file. The window can be scrolled up and down the file
at will.

The text is displayed as it was typed in, in Pale Blue, with
embedded Control Characters displayed in Red. A formatted display
may be selected with ESC F, when the text is displayed in White,
and the effects of the embedded Control Characters, rather than
the characters themselves, may be seen. In formatted display
mode, Underlined text is displayed in Red, Bolded text in Dark
Blue, and Underlined Bolded text in Purple. The User may set
Page Width, Margin, Indent and Right Jusfitication for the
formatted display, and the values selected will be the defaulted
values for these parameters at print time.

Note that the formatted display does <u>not</u> alter the text in the
buffer, which is stored unformatted. Because the text is
unformatted, it is not necessary to remarginate, repaginate or
retabulate. Only when it is printed is the text physically
formatted.

Text can be inserted anywhere in the file by simply typing it
in as EDIT defaults to <u>insert mode</u>. <u>Overwrite mode</u> is available
for editing tables of data. (ESC O)

Most editing functions can be performed backwards as easily as
forwards. You can move and delete characters, words, and
paragraphs backwards and forwards. This ability to do things
in both directions with equal facility is because the editing
commands are <u>bi-directional</u>.

As there are a large number of editing commands, you will find
it convenient to use only a small number of these. Which ones
are best will depend on your own personal <u>style</u>, and the <u>nature
of the task</u> you are performing. <u>Full Onscreen Help</u> on the
available commands may be obtained with ESC H.

As you become familiar with the system, you will notice that
there is full keyboard and printer <u>buffering</u>. This means you
can type at any rate you like, and EDIT will always catch up.
DO NOT type while files are saving.

The most important idea in EDIT is the concept of a paragraph.
You should type a paragraph without regard to where line breaks
occur on the screen pressing RETURN only at the end of a
paragraph. In unformatted display mode a word at the end of
a screen line may be apparently broken over the end of that line.
In formatted display mode a word that is going to be broken
in this way would be "wrapped around" onto the start of the
next line.

Some of the advanced features of the Edit module enable the
operator to:

(a)   move to:
      - characters
      - words
      - paragraphs
      - top of text
      - bottom of text
      - any string

(b)   delete:
      - characters
      - words
      - paragraphs
      - marked blocks

(c)   move, duplicate or delete blocks of text

(d)   locate a particular phrase as many times as required by using
      the Global Search function

(e)   replace a particular phrase as many times as required by using
      the Global Replace function

(f)   select either Insert or Overwrite mode

(g)   select tabulation functions, either - jump right to next tab stop
                                          - jump left to previous tab
                                            stop
                                          - push text to next tab stop
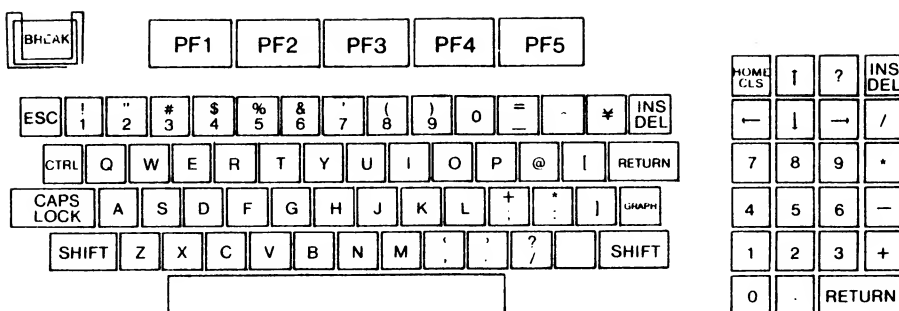
3.2 KEYBOARD CONTROL

The following function keys used extensively by HiWriter
are activated as follows:

CTRL (character)   Hold down CTRL, press the character,
                          release both.

SHIFT (character)   Hold down SHIFT, press the character,
                          release both.

GRAPH]   Hold down GRAPH, press], release both.

ESC (character)   Press ESC and release, press the
                          character and release.

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3.3 RETURN: USE AND FEATURES

The use of RETURN in HIWRITER indicates the end of a paragraph
(or heading). When a paragraph indent is specified indentation
will occur immediately following every RETURN character
throughout the text. The User must become accustomed to using
RETURN only at the end of each paragraph, not the end of each
line or sentence as with typewriters and some other less
flexible word processing systems.

Note that a RETURN functions as an ordinary character. This
means that, for example, two lines can be joined together by
deleting the RETURN between them; and two RETURNS in succession
indicate end of paragraph followed by a blank line. Thus
trailing spaces and blank lines in the source text are stored
as a single RETURN character rather than a string of spaces,
providing maximum economy of memory.

RETURN will also switch OFF underlining and bolding.

If you wish to see RETURNS displayed in unformatted mode onscreen
(as blue down arrows) CTRL 0 will display them. CTRL 0 again
will remove this display.

3.4   OVERWRITE AND INSERT MODES

HIWRITER automatically operates in insert mode. Thus if the
cursor is placed anywhere in the text, added characters will
be INSERTED, not written over existing text. Many word
processing systems can only function in overwrite mode -
with HIWRITER you have all the options.

Insert mode is most useful for continuous text paragraphs,
where the alterations involve insertion (and/or deletion) of
variable length text. The cursor is positioned by the User
at the required position, and each subsequent character
entered will 'force' the existing text right one character,
ensuring that no deletion of subsequent text occurs. When
deleting in insert mode, text to the right of the cursor
position is 'towed' to the left simultaneously with the deletion,
thus automatically ensuring correct continuity of text.

Overwrite mode is essential for special formatting situations
such as mathematical tables where alterations must not disturb
existing and subsequent text (e.g. column alignment). The next
character entered by the User will overwrite, i.e. existing
text to the right of the cursor will be erased and replaced
by the current entry simultaneously.

ESC 0   Overwrite mode.   A second ESC 0 will return the User
                          to Insert Mode.

If necessary, it is possible to insert spaces whilst in
overwrite mode by holding down SHIFT and hitting the INS/DEL
ky.   (Alternatively, if only one character is to be inserted
whilst in overwrite mode, the required character preceded
by CTRL Z will have the same effect).   SHIFT INS/DEL and
CTRL Z (character) operate identically in both insert and
overwrite modes.

In Overwrite mode a RETURN character will create a line break
to the right of the cursor (forcing subsequent text down one
line) without altering cursor position, while in insert mode
a RETURN character will create a line break to the right of the
cursor (forcing any subsequent text down one line) and
reposition the cursor at the beginning of the new line.

3.5   CURSOR FUNCTIONS

3.5.1   Character Functions

→	Move right one character
←	Move left one character
CTRL G	Delete right one character (deletes character under cursor)
DEL	Delete left one character (deletes character before cursor)
INS	Insert one space to right of the cursor position
CTRL W	Un-delete right one character (reverses the effect of DEL)
CTRL Y	Un-delete right one character (reverses the effect of CTRL G)
CTRL Z	Embed the next character typed by the User. Mainly used to embed format control characters into text.

3.5.2   Word Functions

A word is defined as a sequence of alphabetic and numeric
characters, or a sequence of the same character (where it is
not alphabetic or numeric).

SHIFT →	Move right one word
SHIFT ←	Move left one word
HOME	Delete right one word
CLS	Delete left one word

3.5.3   Paragraph Functions

A paragraph is a sequence of characters terminated by a RETURN.

down arrow ↓	Move downwards to start of next paragraph
up arrow ↑	Move upwards to end of previous paragraph
CTRL V	Delete to end of current paragraph. If already at end of paragraph then delete paragraph below.
CTRL A	Delete to start of current paragraph. If already at start of paragraph then delete paragraph above.

See also BLOCK FUNCTIONS in this Section for manipulation of
paragraphs or blocks of any size.

3.5.4 Tabulation Functions

ESC I   Set or clear at current postion. Each tab stop
is displayed as a Yellow "I" at the bottom of
the screen when status display mode (ESC T) is
activated.

CTRL I   Move right to screen tab position. Initially,
tabs are set every 10th character position.
If the next tab stop is past the end of the
paragraph, then spaces are inserted to the next
tab position.

CTRL N   Move left to screen tab position. Same as tab
right except that trailing blanks at the end of
paragraphs are deleted.

CTRL J   Justify text. Same as tab right, but text is
pushed along ahead of the cursor.

Skipping Instructions

CTRL T   Skip to the top of the text.
CTRL E   Skip to the end of the text.

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3.6   REPEAT FACTORS

In addition to the keyboard auto-repeat feature (which provides
automatic repetition of any key held down longer than half
a second) there is a powerful software-controlled repeat
feature available for many HIWRITER cursor functions,
as well as the keyboard arrow keys. This is indicated by
preceding the required command with ESC (number), e.g. ESC 2,
which will repeat twice the command entered subsequently. The
User may specify any integer up to 255 repetitions.

Here are some examples:-

ESC 80→will move the cursor 80 characters to the right.
ESC 2 CTRL A will delete 2 paragraphs to the left.
ESC 6 CTRL I will move the cursor the 6th tab setting to
the right.

This feature itself can be duplicated by entering ESC = which
repeats the previous command; for example having specified ESC
80→, ESC = will again move the cursor 80 characters to the
right. The number of repetitions can be varied with ESC 4
where 4 can be replaced by the new User-specified integer;
for example, having specified ESC 6 CTRL I to move the cursor
to the 6th tab position, ESC 2 = will move the cursor another
2 tab positions.

This feature can also be used to search, for example, for the
3rd occurrence of a specified string (see Search and Replace
in this Section) by preceding the Search command with ESC 3.
Other applications for this function will become apparent
to the User as they become more conversant with the whole
range of HIWRITER commands.

3.7 EMBEDDED CONTROL CHARACTERS

Certain control characters can be embedded in the text of a document, to control the format of the printed text.

These control characters are embedded during EDIT but only take effect at print time. They are embedded by the following sequence:

CTRL Z CTRL (character)

embeds a CTRL (character) in the text

e.g. CTRL Z CTRL N embeds a control N (or SO) character.

Note that some of the "controls" are actually ordinary characters. For a full list and details of the effects of the CTRL characters see section 4.8.

3.8 @ COMMANDS

These formatting commands are also entered during EDIT,
but only take effect at PRINT time. Refer to Section 4
under @ COMMANDS for full details.

If you really wish to start a paragraph with an @, then you
must use two @'s, e.g.:

> @@ $5.00 ea, this will be $25.00!

>> will print as:

> @$5.00 ea, this will be $25.00!

If an illegal command is used, then it will be displayed at
print time on the screen, and you will be asked to type
in a correct one.

3.9   BLOCK FUNCTIONS

A marker is a GRAPH] character inserted by the user.

A marked block consists of all text between a marker and the
cursor. In an unformatted display a marked block is
displayed in Red. HIWRITER searches for a marker from the
cursor position upwards. Therefore the cursor must be below
(to the 'right' of) the marker for the block to be detected.

This means that several blocks can be specified at once if
necessary; the cursor can be positioned to indicate which block
is to be manipulated.

3.9.1 Deleting blocks of text

    ESC D   Deletes the marked block from the text.
                         Removes the marker also.

3.9.2 Duplicating blocks of text

    ESC C   Copies the marked block to the copy buffer.
                         Removes the marker also.

3.9.3 Moving blocks of text

    ESC G   Copies the marked block to the copy buffer
                         and deletes it from the text. Removes the
                         marker also.

3.9.4 Inserting blocks of text

    ESC R   Inserts the text in the copy buffer into the
                         text at the cursor position. This is a
                         typical example where you may wish to use
                         a Repeat Factor.

    e.g., ESC 17 R will insert 17 copies of the text stored in
    the copy buffer into the text.

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3.10   SEARCH AND REPLACE

3.10.1 Search

CTRL Q   Search right for a specified string of characters.
                Enter GRAPH], then the string of characters
                you wish to search for. It must not exceed 128
                characters in length. Type CTRL Q to indicate
                the end of the string, which is then searched
                for automatically. The display stops at the
                first occurrence found, if any, or stops at the
                end of the file. To search for the same string
                again, type CTRL Q as needed.

For example, to search for the string "I must go." at the end
of a paragraph, enter GRAPH] I must go. RETURN CTRL Q which
will find the first occurrence of this string followed by a
RETURN character (which marks the end of a paragraph.)   If
this sequence of characters does not occur in the current
file you will find yourself at the end of text. If it occurs
more than once HIWRITER will locate the first occurrence, and
pause for further instructions. If you wish to locate the
next occurrence of the same string, simply enter CTRL Q again
- otherwise, do not.

CTRL P   Search left for a specified string.
                The comments applicable to CTRL Q apply in all
                cases to CTRL P - except CTRL P locates the first
                occurence of the specified string to the left
                of the cursor.

3.10.2 Replace

CTRL X   Exchange search string for a specified string.
                You must first search for a string (see above).
                Enter GRAPH], then type in the replacement string.
                Like the search string, it must not exceed 128
                characters. Terminate the string with CTRL X.
                To change the same string again, type CTRL X
                again, as many times as required. The direction
                of search and replace will then be specified
                by the direction of the last search.

When the search string has been found, it is highlighted,
and HIWRITER will wait for one of the following responses:

To replace this occurrence and keep searching   - type Y
To simply search for next occurrence   - type N

```
To search for and replace ALL occurrences      - type CTRL Y
To stop searching and replacing                - type CTRL N
To replace this occurrence and stop            - type Z
```

For example, to search right for the string "egg" and replace it with
ham (presuming you have a lot of 'egg's in your text); GRAPH] egg
CTRL Q. This will locate the first occurrence to the right.
Now to specify the exchange string; GRAPH] ham CTRL X. To exchange
this first occurrence of 'egg' type Y; to skip it and go to the
next 'egg' type N. To exchange EVERY 'egg' for 'ham' to the right,
enter CTRL Y; to replace this 'egg' only and stop, type Z; and to
stop searching and replacing right here enter CTRL N.

3.11 <u>MERGING FILES</u>

To insert the contents of another file on the same disk into the current file: Select EDIT, and position the cursor in file 1 where you wish to insert the contents of file 2; ESC X, pick option 5 (change default filename), enter the name of the file you wish to insert, load it with option 2 and then re-enter editing mode with 1.

Alternatively, you can use the @MERGE command (see under @ COMMANDS in 4.6.6 for full details).

For example: to load the contents of a file called ADDRESS (which has your address in it) into a letter.

1.   CREATE a file called LETTER (or EDIT an existing letter file)

2.   exit (ESC X) and type 5, then ADDRESS and hit RETURN

3.   having nominated the file- load it into screen memory with option 2

4.   and Y to return to your LETTER file - which will now include a copy of your ADDRESS file.

When you have finished the LETTER save it as usual with ESC X, 3, Y.
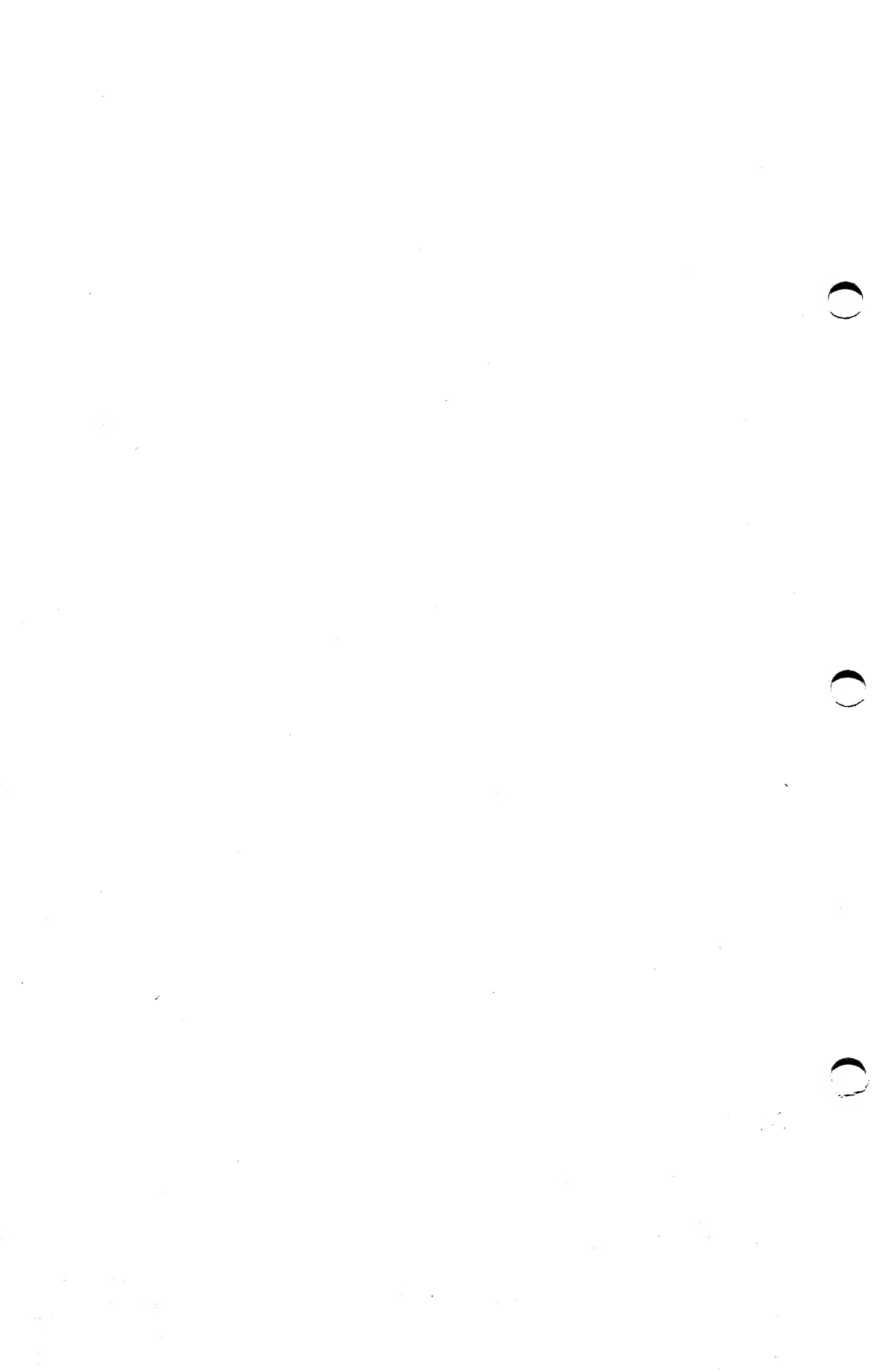
3.12   RECOVERY TECHNIQUES

CTRL W   Restore one character to text right. Used if you
                accidentally delete text left with DEL, CLS,
                CTRL A, etc.

CTRL Y   Restore one character of text left. Used if you
                accidentally delete text right with CTRL G,
                HOME, CTRL V, etc.

RECOVER   (from menu) Used when you accidentally press the
                "0" key in the ESC X routine, or somehow crash
                while editing and end up back at the menu.
                Select RECOVER, press RETURN and Y. Provided
                that the program has not been garbaged in
                memory, this should restart where you left off.

ESC (space)   Cancels accidental use of ESC key.

4. FORMATTING

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4.8   Embedded Control Characters

    4.8.1 Super soft spaces   (PF1)
    4.8.2 Underlining   (Underline Key)
    4.8.3 Bolding   (CTRLZ CTRLB)
    4.8.4 Suppression of blank padding   (CTRLZ CTRLI)
    4.8.5 Automargin   (CTRLZ CTRLK)
    4.8.6 Overprinting   (CTRLZ CTRLH)
    4.8.7 Pseudo-hyphens   (CTRL Z ←)
    4.8.8 Subscripts and superscripts   (CTRLZ CTRL ↓ OR ↑)
    4.8.9 No margin   (CTRLZ CTRLE)
    4.8.10 Typing in the left margin   (CTRLZ CTRLF)
    4.8.11 Right margin   (CTRLZ CTRLE)
    4.8.12 Soft page breaks   (@BM OR @L➤)

4.1 FORMATTING OVERVIEW (FOR ADVANCED USERS)

This section describes the formatting operation from the point of view of word processing concepts.

EDIT and PRINT use several unique and powerful concepts which make this system very powerful. These are described below.

They are described in sections on:

1. Line formatting
2. Page formatting
3. Mail merge facility
4. Paragraph numbering

The basic concent is that the editing program should be used to prepare text in the form of a sequence of characters, and that HIWRITER should convert this sequence of characters into a sequence of pages.

The basic unit of text read in by HIWRITER is the paragraph. A paragraph is a sequence of characters, terminated by the RETURN character.

Two fundamental decisions must be made by HIWRITER. These are:

1. After which word is a new line started?
2. After which line is a new page started?

Answering these questions involves calculating line and page breakpoints, respectively.

Thus, there are two general concepts:

1. Line formatting
2. Page formatting

4.1.1 Line Formatting

(a) Alignment: Finding where to print the first character on the page.

(b) Breakpoint
    Calculation: Finding which is the last character to print.

(c) Padding: Spacing words in the line correctly.

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(a)   Alignment

Finding where to print the first character depends on the
current formatting parameters MARGIN and INDENT, and on
whether the line being formatted is the first line of
a paragraph or not.

It also depends on what control characters are embedded in
the text. Supersoft spaces, super and subscripts, automargin,
and margin alignment characters all affect where the first
character will be printed.

The alignment rules are as follows:

The first character position printed in for the first line of a
paragraph will normally be at MARGIN plus INDENT.

However, if the first character of a line is a hard margin
character (ENQ or CTRL E),*then margin and indent will be
ignored, and printing will commence at column 1.

If a margin alignment character (ACK or CTRL F)*is contained
in a line, that character will be aligned on the margin. This
allows text to be printed to the left of the margin. This is
useful for paragraph numbering. The control character should
not be too for into a line, or there will be too much text
to print in the margin.

Subsequent lines, i.e. lines of a paragraph after the first,
will normally print at MARGIN.

If an automargin character is included in a line, then the
first print position for text in following lines will be
directly under the automargin character. The automargin
character (VT or CTRL K)*is thus used to temporarily reset
the margin within a paragraph. You will use automargin
extensively to format blocks of text with margins other than
the global margin, and to allow paragraph numbers to be aligned
outside these blocks.

(b)   Breakpoint Calculation

Finding which is the last character to print depends on the
current WIDTH, where the first character was printed and what
text follows the first character of the line. It also depends
on whether RIGHT JUSTIFICATION has been selected.

Supersoft spaces, ordinary spaces, superhard spaces, hyphens
psuedo-hypens and the right margin characters all affect which
the last character on the line will be.

*   These control characters must be first embedded with the CTRL Z
    Command. See section 4.8 for details.

Finding the last character on the line is called line breakpoint calculation.

Breakpoint calculation is carried out as follows:

An appropriate number of characters is scanned, the number being determined in part by the WIDTH parameter, and also by where the initial character was aligned, as described above.

If a right margin character (ACK or CTRL F) is found, the right margin will occur at the corresponding position.

After the rough breakpoint has been determined, the actual breakpoint is found by backtracking to the nearest appropriate point. This will be the nearest space, supersoft space, hyphen, psuedo-hyphen, or the current position if none of these can be found. A break will not be made on a superhard space.

If a break is made on a psuedo-hyphen, or in the middle of a word, then a hyphen will be printed at the end of the line.

(c)   Padding

Word spacing in lines depends on the RIGHT JUSTIFICATION and DIABLO parameters.

Spacing words in a line also depends on where supersoft spaces, ordinary spaces, and superhard spaces are found. Right justification is forced in a line containing any supersoft spaces.

If right justification is not selected, and there are no supersoft spaces in a line, then the line is printed as is, giving the ragged right edge effect.

If there is a supersoft space in a line, or right justification has been selected, then padding is inserted between words, so that the last word lines up on the right margin.

If DIABLO has been selected, the padding is in increments of 1/250th of an inch, whereas if DIABLO is not selected, the padding is in whole spaces.

The padding is inserted evenly at all padding points. Normally, each space in a line is a padding point. However, leading spaces are not padded, nor are superhard spaces. Further, any spaces prior to an automargin or padding suppression character are not padded.

Spaces at the end of the line are thrown out, and therefore
not padded.

If a supersoft space is contained in the line, it is
processed differently. Padding is done only at the supersoft
spaces. Supersoft spaces at the beginning and end of the line
are not thrown out. Right justification is forced for any
line containing supersoft spaces.

4.1.2   Page Formatting

Conceptually, page formatting is similar to line formatting.
Page breaks are calculated in much the same way.

A page break is inserted automatically when there is no room
left on the page, or when a page break is generated by a
form feed character, a PAGE or FORM command, or when the
conditions required for a conditional page break character
or command are met.

At the start of each page, a page heading may be printed.
At the end of each page, a page footing may be generated.
Both use up two lines of the page - a heading is followed by
a blank line, and a footing follows a blank line.

Calculation of page breaks automatically takes widow-orphan
lines into account.

A conditional page break comes in two forms.

A lines left command, checks that there are a specified number
of lines left on the page for printing subsequent text,
otherwise a page break occurs, and the text is printed on
the next page.

A soft break character causes a page break to occur if it
occurs in a preset softbreak zone.

The line command may also generate a page break. If the next
occurrence of the nominated line is on the next page, a
page break will occur.

The odd and even commands may also cause a page break. These
ensure that the physical page printed on is either an odd or
even page number. This is to ensure that text is printed
facing the correct way when it is to be bound.

Apart form page breaks, superscripts and subscripts must be
handled. Enough space is always left for superscripts and
subscripts so that lines containing them do not run into
the lines above and below.

Superscripts and subscripts need not be used in matching pairs.
A single subscript at the beginning of a paragraph is very
useful in obtaining half line spacing.

```
            *** Print POEM ***
Page Heading

Page Footing

      Form length    66     No. of copies      1
      Page length    60     First page No.     1
      Page width     60     Last page No.      999
      Margin width   20     Print every        1
      Par. indent    7      Single sheet       N
      Right justify  Y      Selective mailing  N

      Output to Screen Printer or Both (S,P,B)  S
      Pitch          10
      Spacing        6

      Use ←⟶ to position Cursor, RETURN terminate Data
          ↓   Entry, ESC to Exit, PF2 to Print PF3
              to Edit.
```
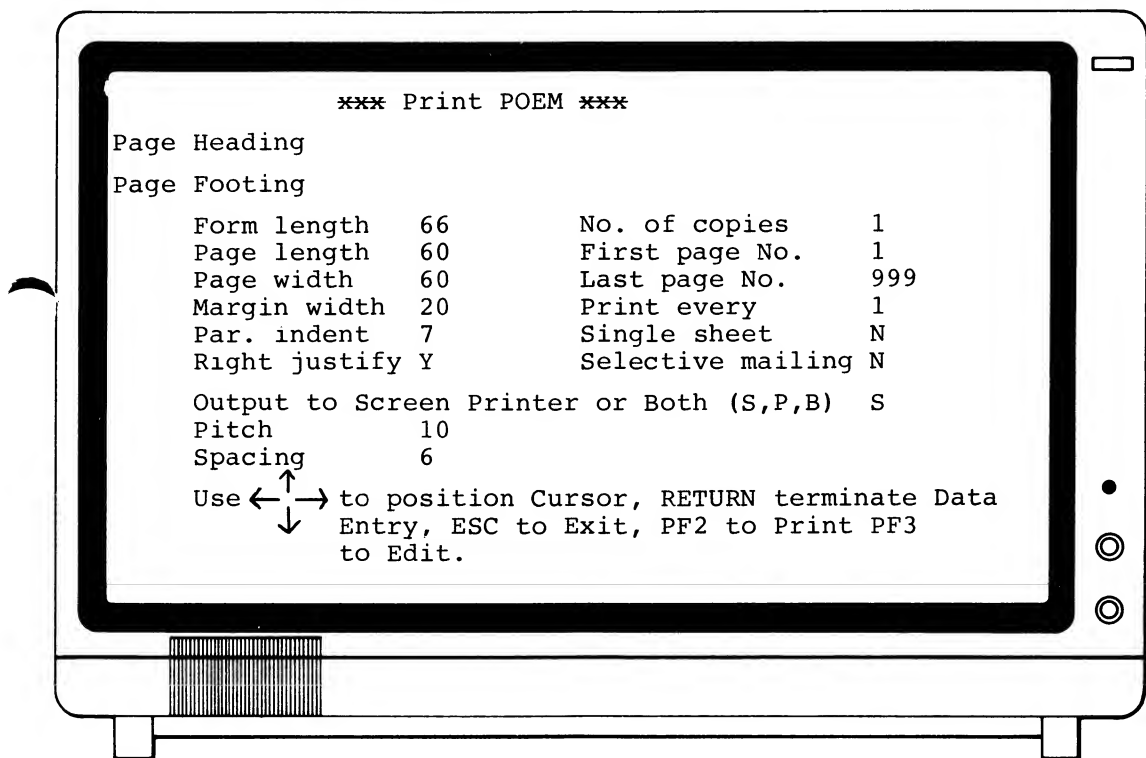
4.2   DEFAULT VALUES

Defaults are initial values programmed into HIWRITER (as displayed above in the Print Menu) so that at the most basic level of operation the format parameters need never be altered. The initial default values are set at:

FORM LENGTH 66	- standard continuous paper size
PAGE LENGTH 60	- 60 lines printed on each page
WIDTH 80	- 80 characters printed from left to right margin
MARGIN 10	- printing commences 10 characters from left hand edge of paper
PARAGRAPH INDENT 5	- automatic paragraph indent of 5 characters
RIGHT JUSTIFY N	- right-hand print edge is not straightened
PITCH 10	- 10 characters printed per inch horizontally
SPACING 6	- 6 print lines per vertical inch - 'single' spacing

These defaults are loaded automatically each time a new file is created. Any User-controlled format command will override pre-programmed default values.

4.3   FORMATTING ESC COMMANDS (GLOBAL COMMANDS)

4.3.1   Formatted Display Mode (ESC F)

ESC F will switch back and forth between the Formatted and
Unformatted screen displays. Unformatted text is displayed
in Pale Blue, with embedded control characters and marked
blocks in Red. Formatted text is displayed in White, with
Underlined sections in Red, Bolded sections in Dark Blue
and Underlined Bolded sections in Purple (Red and Dark
Blue).

In formatted display mode words are not permitted to be
broken over the "edge" of the page, but are wrapped around
onto the next line (this is known as word-wraparound). If a
word is too long to fit on one line, it is broken one
character before the end of the line, a "-" is displayed in
the last character position, and the word resumes at the
left MARGIN position on the next line.

ESC T will switch on/off the Tab Line and System Status, of
which the COLUMN, WIDTH, MARGIN and INDENT figures are set by the
following commands.

The values of WIDTH, MARGIN, INDENT and JUSTIFY currently set
are saved with the file when it is saved and become the
default values shown in the PRINT menu when you print the file
in place of the initial values programmed into HIWRITER
(see section 4.2).

These are global values, i.e. as soon as a new value is
selected it will apply to the entire text of the current file,
both to the left and to the right of the current cursor position.

Whatever values of x are chosed below, you should ensure that:

        WIDTH $>$ (MARGIN + INDENT)   and
        WIDTH $>$=COLUMN

x must be in the range 1 to 255.

4.3.2   Width Commands (ESC W)

        ESC   W   WIDTH = 0
        ESC   x W   WIDTH = x
        ESC +x W   WIDTH = WIDTH + x
        ESC -x W   WIDTH = WIDTH - x

WIDTH is the number of character positions between the leftmost
edge of the page and rightmost position in which a character
could be printed, and includes both left MARGIN and INDENT.

Examples: ESC 70W creates a print page 70 characters wide
(starting at the left-hand edge of the page). ESC +5 W will
increase the last width specified by 5 character spaces;
ESC -10 will decrease the last width specified by 10
character spaces. The effects of these commands can be
seen in both onscreen formatted mode and at print time.

4.3.3   Margin Command (ESC M)

```
ESC    M        MARGIN = 0
ESC    xM       MARGIN = x
ESC    +xM      MARGIN = MARGIN + x
ESC    -xM      MARGIN = MARGIN - x
```

MARGIN is the number of characters in from the leftmost
edge of the document where printing may first occur.

Examples: ESC 15 M will set a margin 15 character spaces from
the left-hand edge of the page. ESC +5 M will increase the
last margin specified by 5 character spaces; ESC -10M will
decrease the last margin specified by 10 character spaces.
The effect of these commands can be seen both in onscreen
formatted mode and at print time.

4.3.4   Indent Command (ESC N)

```
ESC    N        INDENT = 0
ESC    xM       INDENT = x
ESC    +xN      INDENT = INDENT + x
ESC    -xN      INDENT = INDENT - x
```

INDENT is the number of characters to the right of the
MARGIN where the first character of a new paragraph may be
printed. INDENT may be negative provided that it does not
exceed the MARGIN in absolute magnitude (i.e. run off the
left-hand edge of the page).

Examples: ESC 2 N will cause the first line of every paragraph
in the file to be automatically indented 2 character spaces
to the right. ESC +3 N will increase the last indent specified
by 3 character spaces; ESC -5 N will decrease the last indent
specified by 5 character spaces. The effect of these commands
can be seen both in onscreen formatted mode and at print time.

4.3.5   Scrolling Margin Command (ESC S)

```
ESC    S        COLUMN = 0 ·
ESC    xS       COLUMN = x
ESC    +xS      COLUMN = COLUMN + x
ESC    -xS      COLUMN = COLUMN - x
```

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Used only in formatted display mode. When a WIDTH of
greater than 80 characters has been specified it is only
possible to see 80 characters at once. This function
specifies how many characters in from the leftmost edge
of the page to begin the 80 column display.

Examples: When a width of 96 characters has been specified,
the right hand edge of the text can be scanned with ESC 16 S -
i.e. columns 16 to 96 will be displayed onscreen. Using
this same example, the left hand section of the text can
be displayed with ESC -16S (immediately following the ESC 16 S
command) or simply ESC X.

4.3.6   JUSTIFICATION COMMAND (ESC J)

ESC   J   JUSTIFY = ON/OFF

JUSTIFY changes from one state to another when this function
is executed. When JUSTIFY is ON the formatted display blank
pads each line of text so that the rightmost non-blank
character is aligned on the edge of the right hand margin,
except when there is an embedded CTRL E in the current
paragraph, which will cause the rightmost character of each
line of the rest of the paragraph to align to the CTRL E
character. The effect of an embedded CTRL E applies only
to the paragraph being formatted, and lapses to the former
condition at the commencement of a new paragraph. When
JUSTIFY is OFF no blank padding occurs, and the familiar
"ragged right" effect ensures.

4.4 MENU OVERIDE

See PRINT section for full description.

If ESC format commands have been used at the EDIT stage
these will override the default values set up in the
PRINT menu. However, if at the PRINT menu stage you enter
new values these will then override the default and ESC
formatting values for the current print only.

4.5 FORMATTING @ COMMANDS (LOCAL COMMANDS)

Also entered in text at the EDIT stage if required. These commands go into effect at print time only. (Of course the commands themselves will not be printed out.)

These commands MUST commence with the @ character on the left margin, and require one line each (terminated by a RETURN).

If you really wish to start a paragraph with an @, then you must use two @'s, for example:

@@ $5.00 ea, this will be $25.00!

will print as:

@ $5.00 ea, this will be $25.00!

If an illegal command is used, then it will be displayed at print time on the screen, and you will be asked to type in a correct one.

These are local commands, i.e. they apply only to subsequent text (to the right of the new specification). Therefore you may, for example, alter the margin specification for each line or paragraph in your text if you so desire. Each @ command will then remain in force until it is specifically altered within the current file.

4.5.1 Form Length

Abbreviation	Full Command	Explanation
@FF	@FORM	skip to next form top
@FF	@FORM 66	set form length and skip to next form top

4.5.2 Page Length

@PG	@PAGE	skip to next page top
@PG	@PAGE 60	set page length and skip to next page top

4.5.3 Page Width

@WD	@WIDTH 70	set line width 70 characters from the left-hand margin

4.5.4 Left Margin

Abbreviation	Full Command	Explanation
@MG	@MARGIN 10	set margin
@SM	@SHIFTMARGIN 5	shift the margin right 5 characters
	@SHIFTMARGIN -5	shift the margin left 5 characters

4.5.5 Indent

@IN	@INDENT 0	set paragraph indent

4.5.6 Right Justification

@J+	@JUSTIFY	turn on right justification
@J-	@NOJUSTIFY	turn off right justification

Justification is either on or off at all times. When
@JUSTIFY is specified HIWRITER (at print time) blank pads
each line of text so that the rightmost non-blank character
is exactly aligned on the edge of the right margin. When
@NOJUSTIFY is specified no blank padding occurs at print
time and the familiar "ragged right" typewriter effect ensues.
Use of right justification depends entirely on User preference
and the type of application - for example letters are often
printed without right justification to give a slightly
less formal effect to the appearance of the document, while
manuals and specifications are usually printed with right
justification for exactly the opposite reason.

4.5.7 Pitch

Abbreviation	Full Command	Explanation
@PITCH 10		set pitch for DIABLO printer - in this example 10 characters to the inch horizontally (this line is set at 10 pitch).

HIWRITER in connection with a DIABLO printer allows variable
pitch, i.e. character spacing can range from 1 character
per inch right through to print wheel maximum as required.
When alternating different pitches within one file, the User
must co-ordinate the current page width setting with each
pitch change. For example, 8 pitch would require a smaller
page width value than 12 pitch, because the same piece
of text in 12 pitch occupies fewer horizontal print inches.

Abbreviation	Full Command	Explanation
@PITCH 12		sets pitch for DIABLO at 12 characters to the inch horizontally (this line is set at 12 pitch)

4.5.5 Line spacing

@SPACING 3		set spacing for DIABLO printer - in this example 3 print lines to the inch vertically (double spacing).
@SPACING 4		sets spacing for DIABLO at 4 print lines to the inch vertically (one and a half spacing)
@SPACING 6		sets spacing for DIABLO at 6 print lines to the inch vertically (single spacing).

4.5.9 Heading

@HD	@HEADING	the heading. If the heading is to apply to the first page, the @HEADING command must occur before the first printable character. Also changes the heading if required within file.
@H+	@DOHEADING	switch on heading printing at this point.
@H-	@DOHEADING	switch on heading printing at this point.
2H-	@NOHEADING	switch off heading printing at this point.

Examples: To head each page with an automatic page number
on the right-hand edge, follow this sequence: starting at
the first character position in the file, enter @HEADING
PF1 Page @P. On the second line of the file enter @DOHEADING.
@HEADING indicates that the rest of the line constitutes
a heading using the PF1 key (which inserts a supersoft space
character) forces the rest of the line over the right-hand
edge of the page; The word Page prints as seen onscreen;
and the symbol @P automatically prints the current page
number as the final part of the heading. @DOHEADING may be
placed anywhere in your file to commence heading printing;
for example if you have a title page which you wish to
print without page numbering, do not enter @DOHEADING until
the end of the title page, so that page numbering will not
appear until page 2.

If you wish to centre a heading, one way is to use
@HEADING PF1 Title PF1, which will centre Title
automatically at the top of every page between the indent
position and the right margin. (See under EMBEDDED CONTROL
CHARACTERS in this Section for a full description of the tilde -
or supersoft space - and its uses. See also @CENTRE under
Other Functions in this Section for true centering - i.e.
between left and right margins.)

Headings may also be specified at print time as well as being
specified within the current file.

4.5.10 Footing

Abbreviation   Full Command   Explanation

@FT   @FOOTING   the footing
                                changes the footing
@F+   @DOFOOTING   switch on footing printing at
                                this point
@F-   @NOFOOTING   switch off footing printing at
                                this point

Examples: @FOOTING behaves exactly the same as @HEADING,
except that the message will print at the bottom of each
page. Therefore the @FOOTING command must occur before
the end of the page on which it is to appear.

Footings may also be specified at print time as well as being
specified within the current file.

4.5.11 SPECIAL CONTROL FUNCTIONS

@BM   @BOTTOM MARGIN set depth of softbreak zone;
                                e.g. @BM 4 sets zone to 4 lines.
                                This sets the zone at the bottom
                                of the page in which a soft
                                page break character (CTRL A)
                                will cause an actual page break,
                                forcing the next line onto
                                the next page. The initial size
                                of the softbreak zone is 3.

                @WIDOW 6   Ensure that the first 6 lines
                                of a paragraph do not have a
                                page break in them. User
                                specifies number of lines.

Abbreviation	Full Command	Explanation
@L>	@LINESLEFT 8	ensure there are 8 lines left at the bottom of the page. If not, skip to the next page. User specifies number of lines.
	@ODD	ensure currently printing on an odd-numbered page, if not skip to next page.
	@EVEN	ensure currently printing on an even-numbered page, if not skip to next page.
@P=	@PAGENUMBER 99	sets the user page number to 99[1]
@RS	@RESET	reset formatting parameters to those initially specified in the menu
@L=	@LINE 20	start print at line 20, if necessary skip to the next page first.[2]

1   Useful when assembling large documents, where each chapter may be in a separate file. After printing Chapter 1, the appropriate page number is set at the beginning of Chapter 2, and pagination proceeds automatically.

2   Useful when the required section of a document does not start at the top of a page.

4.6   FILE CONTROL FUNCTIONS

4.6.1   @FORMAT

The paragraphs separated by 1 carriage return are merged
together into 1 paragraph, with the carriage return replaced
by a space.

If the User does not like words breaking in the middle, he
can type in sentences shorter than the screen width and hit
carriage return arbitrarily.

Two or more carriage returns are used to delimit the true
paragraphs.

4.6.2   @NOFORMAT

Switch off automatic reformatting.

This command must be preceded by two or more carriage returns.

4.6.3   @CT @ CONTENTS stuff to go in contents

The remainder of the line is written to the contents file,
which is printed at the end of the document. A reference
to the current page number can be included by using the
symbol^P, which is replaced by a 2 digit page number. The
Contents page is always the last page printed from each file,
as the pagination is recreated dynamically with each print
(to allow for editing changes), and must be manually moved to
the correct position in the print. Therefore, at the end of
any file containing @CT commands, the User should enter a page
break (CTRL Z CTRL L), to ensure that Contents are printed
on a separate page. If the file also contains automatic
numbering as a heading or footing, the User should insert a
@NOHEADING or @NOFOOTING command immediately before the last
page break. This ensures that the Contents page will not be
paginated incorrectly.

4.6.4   @IX @INDEX entry to appear in index

The remainder of the line is written to the index file INDEX
(which must be printed separately) on the system disk. This
file is overwritten with each new INDEX generated. A reference
to the current page number can be included by using the symbol
∧P, which is replaced by a 2 digit page number.

4.6.5   @CHAIN:1:filename

Files can be chained together with the @CHAIN: command for
printing purposes. For example if @CHAIN:1:CHAPTER2 is put as
the last line of the file CHAPTER1, the CHAPTER2 will be
printed, tacked onto the end of CHAPTER1. Pagination, if
specified in CHAPTER1, will be consecutive.

4.6.6   @MERGE:1:filename

A file can be merged into the middle of another file with the
@MERGE: command. For example @MERGE:1:TABLE1 will be replaced
with the contents of the file TABLE1 at print time.

Note: Any number of files can be chained together. Any number
of files can be merged into a document. A merge file may also
contain @MERGE: statements. A merge file may also chain to
another file.

4.7   MISCELLANEOUS FUNCTIONS

4.7.1   @CN   @ CENTRE text to be centered

Centres the text following this command (up to the next carriage
return) between left and right margins.

4.7.2   @REM

Comment paragraph - completely ignored at print time.

Useful when the user wishes to put comments into a document
for information or record only but which would not appear
on the printed document.

@REM must be on the left hand side of the page with no other
characters to the left of the line.

e.g.   @REM.   This document last edited by HiSoft on 31/12/82.

4.8   EMBEDDED CONTROL CHARACTERS

These are <u>single character</u> commands. However, they are
HIWRITER instructions which only take effect at PRINT time.

Certain control characters can be embedded in the text of a
document, to control the format of the printed text.

EDIT can be used to embed these control characters by the
following sequence:

CTRL Z CTRL (character)

embeds a CTRL (character) in the text.

e.g. CTRL Z CTRL N embeds a control N or SO character.

Note that some of the "controls" are actually ordinary
characters, for example for pseudo hyphen.

The legal control characters are:

CTRL L	(FF)	form feed (go to next page)
CTRL N	(SO)	switch underlining on
CTRL B	(STRX)	switch bolding on
CTRL O	(SI)	switch underlining and bolding off
CTRL M	(CR)	end of paragraph and/or switch underlining and bolding off
CTRL I	(HT)	suppress blank padding
CTRL K	(V)	automargin
CTRL H	(BS)	backspace and overprint
←	(US)	pseudo hyphen
CTRL ↑	(FS)	superscript
CTRL ↓	(GS)	subscript
CTRL E	(ENQ)	(i) at start of paragraph aligns on hard left margin
		(ii) elsewhere in line sets margin at that point
CTRL F	(ACK)	align on margin
CTRL A	(SOH)	soft page break

There are two other major formatting commands which behave like
controls, but DO NOT require the CTRL Z prefix. These are:

TILDE	. (PF1)	supersoft space
UNDERLINE	(underline character) - superhard space	

PF1 refers to the Programmable Function key number 1 at the top
of the keyboard in the HIWRITER program this has been coded to
generate the tilde or supersoft space character when struck.

4.8.1 Super Soft Spaces and Super Hard Spaces

The Tilde character is used as a super soft space, a space
which stretches to any required width within one line. Print
lines containing a supersoft space are always right justified,
however, blanks at the end of a paragraph are not removed.
The super soft spaces in the line are padded so that the
rest of the line fills up the entire print width. Ordinary
blanks are not padded. Supersoft spaces at the beginning
and ends of a line are padded. Thus supersoft spaces
can be used to force right justification, by putting a
super soft space at the beginning of a line, and centering,
by putting super soft spaces at both ends of the line.
Further, a line can be right and left justified, with all
the padding done at the middle, by putting a super soft
space in the middle of the line. Super soft spaces at a
breakpoint are deleted.

Tilde is generated with one keystroke - the PF1 (short for
Programmable Function 1) key.

Superhard spaces do the opposite - no stretching, no
line-break.

The superhard space is generated with a single keystroke - the
underline key.

4.8.2 Underlining

Underlining is enabled by the SO character, and disabled by
both the SI and/or CR characters. This feature is also
operable in the EDIT mode, and thus EDIT should be used
to prepare a textfile which is to contain underlining.

Character	Key entries in EDIT	
SO	CTRL Z CTRL N	(underline on)
SI	CTRL Z CTRL O	(underline off)
CR	RETURN	(underline off)

Example: To underline a word (or line), use this sequence:
CTRL Z CTRL N (type word or line) CTRL Z CTRL O.

4.8.3 Bolding

Bolding creates a darker print effect by printing each
character twice over. Bolding is enabled by the STX
character, and disabled by both the SI and/or CR
characters.

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Character	Key entries in EDIT
STX	CTRL Z CTRL B (bolding on)
SI	CTRL Z CTRL O (bolding off)
CR	RETURN (bolding off)

4.8.4 Suppression of blank padding

Normally when justification is selected, only leading spaces
are not padded. If you wish to suppress padding up to a
particular point in a line (e.g. when using paragraph numbers
you want the first words of each paragraph to line up exactly),
then the horizontal tab character (HT) can be used. Then no
spaces before the HT are padded.

Character	Key entries in EDIT
HT	CTRL Z CTRL I

Example: As in the example above; a sample paragraph would
be commenced by 1.2.3 Internal features CTRL Z CTRL I
followed by paragraph text. If each paragraph has the
blank padding suppression character in the same place, all
paragraph identifiers and pagragraph text will line up neatly.

Blank padding may also be suppressed by the use of the
superhard space, which is the underline character. This
character is treated exactly as an ordinary nonspace character,
except that it is printed as a blank. This is useful when
a person's name, for example, would otherwise be broken between
the title, christian and surnames over a line break. By
inserting the underline character instead of spaces between
the title, christian name and surnames, the whole name
will be printed as one unit.

Character	Key entries in EDIT
UNDERLINE	Underline character (superhard space)

4.8.5 Automargin

The margin can be temporarily adjusted for a particular
paragraph by using the VT character. All text which overflows
onto the next line will line up under the VT character.
VT also has the effect of suppressing blank padding, as for
HT.

Character	Key entries in EDIT
VT	CTRL Z CTRL K
Example:	To make the rest of this paragraph line up under the T of To, the sequence was: type (or space) across to the desired position, CTRL Z CTRL K and continue typing the rest of the paragraph text straight across the screen as usual.

4.8.6 Overprinting

Special symbols may be formed by printing two characters over each other. This is done by putting a backspace after the first character. Effects such as Ø é ê Ɋ can be obtained.

Character	Key entries in EDIT
BS	CTRL Z CTRL H

Example: Ɋ was created by typing 0<CTRL Z CTRL H>/ in immediate succession, without any spaces.

4.8.7 Pseudo-Hyphens

In long words, a pseudo-hyphen can be inserted to indicate to HIWRITER that a hyphen may be inserted and the word broken if it occurs at the end of a line. Without the pseudo-hyphen, the whole word would have been put on the next line. Pseudo-Hyphens are not printed unless such a word break occurs.

Character	Key entries in EDIT
US	CTRL Z ←

Example: To pseudo-hyphenate the word semiautomatially between semi and automatically, use this sequence; enter semi CTRL Z ← automatically without inserting any spaces in the process.

4.8.8 Subscripts and Superscripts

If you have a DIABLO printer then you can do any level of subscripting or superscripting. Printing is adjusted half a line down or up respectively. Lines are spaced automatically to ensure that sub and super scripted text does not print over the previous line, the next line, or any underlining of the current line.

Character	Key entries in EDIT	
FS	CTRL Z CTRL up arrow	(superscripts)
GS	CTRL Z CTRL down arrow	(subscripts)

Example:

$$A=B^{2*4}+C_{i,j2}$$

```
                      2
                    2
                  2
        b=fred2
```

was created by preceeding each superscript with CTRL Z CTRL
(up arrow), and each subscript with CTRL Z CTRL (down arrow).
After each superscripted character _must_ come a subscript
command, _and vice versa_, to return the printer carriage
to standard line position for subsequent text entry.

4.8.9 No Margin

The margin can be temporarily suppressed by use of the no
margin character at the beginning of a paragraph. The text
in the paragraph will be printed as if margin $\emptyset$ and indent
$\emptyset$ had been specified. Subsequent paragraphs are not affected

Character	Key entries in EDIT	
ENQ	CTRL Z CTRL E	(Must be first character in a paragraph)

Example: If the User requires an entire paragraph to commence
on the left-hand edge of the page (while retaining the current
margin for subsequent text), commence with a new paragraph
at the extreme left-hand edge of screen. Enter CTRL E and
type in the paragraph as usual.

Specify INDENT $\emptyset$ while using this command.

4.8.10 Typing in the left margin

It is sometimes necessary to extend the first few characters
of a paragraph of text in the margin, especially paragraph
numbers. The left margin align character can be used for this
purpose by typing the number of characters to appear in
the margin, then putting the margin align character where the
margin should be. The rest of the paragraph will line up on
the previously specified margin. Note that the alignment
actually occurs at margin plus indent; therefore it is
wise to specify INDENT 0 when using this feature. Ensure
that the number of characters before the alignment character
is less than or equal to the margin.

Character	Key entries in EDIT
ACK	CTRL Z CTRL F

Example: To force the word Example at the beginning of this paragraph
into the margin, the sequence would be: set INDENT to Ø;
type Example: and a space; then enter CTRL Z CTRL F, and
continue typing the rest of the paragraph as usual. This
would force Example: and the space to the left of the margin,
while the rest of the paragraph would line up under the T of
To on the true margin.

4.8.11 Right Margin

The right margin (i.e. page width) can be temporarily shortened
by placing the right margin character in the text of a paragraph
where a line break is to occur. The right margin for that
paragraph will be set at this point.

Character	Key entries in EDIT
ENQ	CTRL Z CTRL E (Must not be first character in a paragraph)

Example: In   this paragraph, the sequence   used
was: type across the screen as usual,   until the
entire paragraph was entered; then using the cursor
arrows, move the the space following the word used
, and   insert CTRL Z CTRL E to mark the   required
right-hand edge of this paragraph.

4.8.12 Soft Page Breaks

A soft page break is a conditional form feed. If the soft
page break is found near the top of a page, it is ignored.
If it is found in the softbreak zone at the bottom of
the page, a new page is skipped to.

The initial size of the softbreak is 3. This can be changed
with the @BOTTOM MARGIN OR @BM command. Alternatively,
the @LINESLEFT OR @L command can be used to ensure that
a certain number of lines are left at the bottom of a page.

A soft page break should be inserted at the beginning of
every important group of text that you would rather print
on the next page then break in the middle. This is similar
to widow orphan protection for multiple lines.

Indent 5

 This is a sample paragraph typed out using the standard defaults (except for width). You will notice the 10 character margin, 5 character indent and the width of 60 being used.

@INDENT –5

This para graph is printed with a negative indent so you can see the effects of negative indents on text. We also switch justify on.

@INDENT 0

** Now we have set the indent to 0 for a demo of the use of control characters. In the following text use of the margin alignment characters CTRL K (Automargin), CTRL F (align on margin) and CTRL E (no margin) is demonstrated. Also note the use of CTRL E to set the right margin.

** Right margin reset here temporarily —— ›. Now we have set the indent to 0 for a demo of the use of control characters. In the following text use of the margin alignment characters CTRL K (Automargin), CTRL F (align on margin), and CTRL E (no margin) is demonstrated. Also note the use of CTRL E to set the right margin.

CTRL E here

CTRL K here

** This para has a CTRL K in it just before the 'T' of 'This'. Now we have set the indent to 0 for a demo of the use of control characters. In this text use of the margin alignment character CTRL K (Automargin) is illustrated.

Ctrl F here

** This para has a CTRL F in it just before the 'T' of 'This'. Now we have set the indent to 0 for a demo of the use of control characters. In this text use of the margin alignment character CTRL F (align on margin) is demonstrated.

Ctrl E here

** This para has a ctrl E in it just before the '**'. Now we have set the indent to 0 for a demo of the use of control characters. In this text use of the margin alignment character CTRL E (no margin) is demonstrated.

Left Margin   **Right Margin**

WIDTH 60

5. <u>PRINTING</u>

5.1 PRINTING OVERVIEW

5.1.1 Select Files

Either:

Print a letter by selecting PRINT:

(a) Select 'PRINT' command with arrow keys
(b) Select archive file with arrow keys
(c) The Print Module is now activated to enable the
     nominated file to be printed

OR

Merge and print a mailing file by manual command.

(a) Select 'MAIL' command with arrow keys
(b) Select archive file with arrow keys
(c) Select mailing file with arrow keys
(d) The print module is now activated to enable the nominated
     letters merged with the selected mailing file to be
     printed.

5.1.2 Select Menu Parameters

The PRINT menu is now displayed.

The current field is highlighted.

You must respond to the current field by:

(a) pressing RETURN to select the displayed value OR
(b) typing an alternative value, and pressing RETURN.

If an illegal value is entered, then the message

   '**ILLEGAL VALUE! PLEASE RE-ENTER

   is displayed, and you are given another go at entering a
   valid value.

After all values have been selected press the PF2 key to
start printing the document.

5.1.3 Exit From Print

At the end of the document, the message:

   'End of Document, REPRINT??'

   is displayed, formatting has been completed.

   Enter return to exit, or 'Y' to reprint.

```
                        ¥¥¥ Print POEM ¥¥¥

Page heading

Page footing

        Form length      66      No. of copies    1
        Page length      60      First page No.   1
        Page width       60      Last page No.    999
        Margin width     20      Print every      1
        Para. indent     7       Single sheet     N
        Right justify    Y       Selective mailing N

        Output to Screen, Printer or Both (S,P,B) S
        Pitch            10
        Spacing          6

        Use ←↑→ to position Cursor, RETURN terminate Data
            ↓   Entry, ESC to Exit, PF2 to Print, PF3 to
                Edit.
```
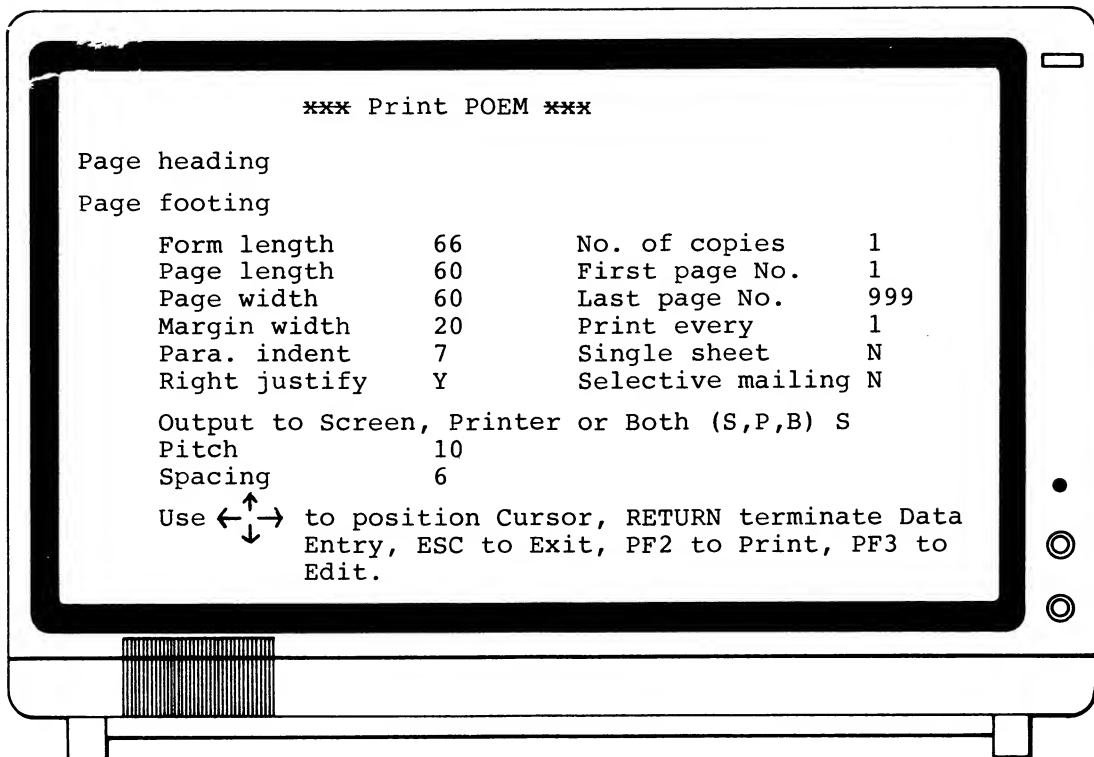
5.2   MENU SELECTION PARAMETERS

The following options can be selected or changed.

5.2.1 Change Heading

Select option 1 at the SELECT stage.

The cursor is positioned under the display.

'PAGE HEADING'

If you do not want a page heading, press RETURN.

If you do want a page heading, then type it in, and press
RETURN.

The heading begins to print on the left edge, not the
margin. The heading also prints to any width, and is not
wrapped around to the next line at all. A blank line is
always printed under the heading.

Certain special characters may be included in the heading.
See below under SPECIAL CHARACTERS USED IN HEADING OR
FOOTING for a full explanation. (section 5.3)

5.2.2 Change Footing

The page footing is entered in the same way as the heading.

Select option 2 at the SELECT stage.

The cursor is positioned under the display.

'PAGE FOOTING'

If you do not want a page footing, press RETURN.

If you do not want a page footing, type it in, and press RETURN.

The footing begins to print on the left edge, not the margin. The footing also prints to any width, and is not wrapped around to the next line at all. A blank line is always printed before the footing.

Certain special characters may be included in the footing. See below under SPECIAL CHARACTERS USED IN HEADING OR FOOTING for a full explanation. (section 5.3)

5.2.3 Change Page Layout

All the following parameters must then be either changed, by entering the new value followed by RETURN, or by accepting the current value by just entering return.

Prior to commencement of formatting, the parameters as displayed for this group are saved on the system disk. When the print options menu is activiated again by calling up MAIL, or by reprinting a document, the default parameters will be the same as used last time.

Note that these parameters are not associated with the particular document you are printing. They come up each time the same as they were the last time before formatting commenced.

(a) Form Length

This is the number of lines long the form is, from the top perforations or edge, the the bottom edge.

Note that this will depend on the spacing selected, if a DIABLO printer is being used.

A standard computer page, 11 inches long, is 66 lines long at a spacing of 6 lines per inch, and 88 lines long at 8 lines per inch. Double spacing is achieved with a form 33 lines long at 3 lines per inch.

(b) Page Length

The page length is the number of lines to be printed on each page. This number must be less than or equal to the form length.

This distance is called the vertical print window, and includes space for the heading and footing if they are selected. Two lines are used by each of the heading and footing, if they are selected.

The print window begins where you position the print head in the printer, that is, printing commences on the line that you line up the paper on. No extra lines are skipped before printing, so it is usual to position the printhead slightly lower than the top of the form.

Printing continues until an end of page indicator is found, or the required number of lines, including the heading and footing, has been printed.

With a 66 line form, 50 to 60 lines are often used to print on.

(c) Width

The width is the number of characters from the left edge to the right margin. No printing can occur to the left of the left edge, or to the right of the right margin.

The left margin area is included in the width.

Width must be greater than margin.

This distance is called the horizontal print window.

Note that the actual width printed on will depend on the pitch selected, if a Diablo printer is being used. If a pitch of 10 characters per inch is selected, then a width of 70 will cause printing in a 7 inch window, where as if a pitch of 12 were selected, a width of 84 characters would print in a 7 inch window.

If indent is not used, printing normally commences at the left margin, not the left edge. This means that the actual number of characters printed will usaully be the width less the margin.

(d)　Margin

The left margin is the number of characters in from the left
edge that printing of each line normally commences.

The margin must be less than the width.

In general, text will not print in the margin.

However, if a negative indent is specified, then the first
line of each paragraph will print in the margin.

With the exception of the first line of a paragraph, subsequent
lines of a paragraph are printed commencing on the margin.

(e)　Indent

If an indent is specified, the first line of each paragraph
is printed indented from the margin by the number of
characters specified.

If the indent is positive, printing of the first line of each
paragraph will commence that number of characters to the right
of the margin. This is a standard indent.

With a positive indent, margin plus indent must be less than
width.

If the indent is negative, printing of the first line of each
paragraph commences that number of characters to the left
of the margin. This is a reverse indent.

With a negative indent, the amount of the indent must be less
than or equal to the margin. Use of a negative indent equal
to the margin is quite common, causing the first character
in each paragraph to print on the left edge, and subsequent
lines to print on the margin.

(f)　Right Justification

Select either 'Y' for right justification, or 'N' for
ragged right edge.

When HiWriter prints out a paragraph, any word which runs
over the end of the line is automatically printed on the next
line. This process is called word wraparound. With simple
word wraparound, the last word on each line may end in a
different place, leaving the text with a 'jagged' right
margin.

This effect may be desired for certain types of documents and letters.

The jagged edge can be suppressed by inserting extra spaces between words in the line. This process is called right justification, and if selected is performed automatically.

It ensures that the last character of the last word in each line of a paragraph is aligned with the right margin. This gives each paragraph the appearance of a block, as the text lines up on both the right and left margins.

This is done by a process called blank padding. Additional blanks are printed between word to force the last word in a line to line up with the right margin (hence right justification).

If you have a DIABLO printer, then the appearance of right justified text wil atuomatically be further improved if you select right jusftification by a process called proportional blank padding. Proportional blank padding means that each space in a line is stretched by the same amount, just enough to line the last word up with the right margin.

5.2.4   Change Page Selection

Select option 4 at the SELECT stage.

(a)   Number of Copies

The total number of copies of each document to print.

If mass mailing is selected, then this number of copies is printed for each mail-merge data set.

If a keyboard entry is used in the document, it must be entered once for each copy. In fact this is a primary function of number of copies: to print the same letter with several variations entered from the keyboard.

(b)   First Page to Print

This is the number of the first physical page to be printed. It is not necessarily related to the page number assigned by the user.

Pages prior to this page are formatted so that this page can be located, however, they are not printed. Any variable entries required on pages prior to this page must still be entered, as the length of these variable entries may change what prints on the nominated page.

(c)   Last page to print

This is the number of the last page to be printed.

It must be greater than or equal to the number of the first page to print, or no pages will be printed at all.

While this page is usually, though not necessarily, printed, any subsequent pages will not be printed.

If the last page number is set to be the same as the first page number, then exactly one page is printed.

(d)   Print Every

This is the number of pages to be added to the last page printed to identify the next page to be printed.

If this number is 2, for example, every second page is printed. This is particularly useful for printing on two sides of stationery which is to be bound together as a book (i.e. two sided printing.)

If the next page to be printed is greater than the last page to print, then printing terminates.

(e)   Single Sheet Mode

Single sheet mode stops the formatting process at the end of each page.

At each pause point it is possible to:

Print the next page

Skip the next page.

Stop altogether.

Exit single sheet mode, and print all subsequent pages without pausing.

See below for a full description of options.

Single sheet mode serves three functions.

(i) It is used when test printing to pause the formatting process after each page has been printed, so that the page can be examined on the screen.

(ii)   It is used in conjunction with non-continuous stationery, to pause the printing process while the next sheet is positioned in the printer:

<div align="center">or</div>

(iii) It is used when you wish to select whether a page is to be printed or not.

When formatting pauses at the beginning of each page, the current page location is displayed. This is given in terms of the current physical page number and the current segment and subsegment number.

(f)   Selective Mailing

ᵗf the mail-merge facility has been selected, then selective mailing may be initiated.

When initiated, selective mailing displays each mail-merge data set before it is merged and printed.

You may then opt to:

-   merge the data set

-   skip to the next data set

-   stop altogether

-   merge all subsegment data sets.

5.2.5   Select Output Device

The output device is selected as:

S - for output to screen only, i.e. for a test print.

P - for output to the printer only, for a background print. Note that status information on the progress of the formatting is displayed on the screen.

B - for display on the screen and output to the printer.

If you have a DIABLO printer (or a DIABLO compatible interface printer), then improved print quality can be obtained when right justification has also been selected by use of proportional blank padding, as explained above under Right Justification, and repeated here:

If you have a DIABLO printer, then the appearance of right justified text will automatically be further improved if you select right justification by a process called proportional blank padding. Proportional blank padding means that each space in a line is stretched by the same amount, just enough to line the last word up with the right margin.

If you have a DIABLO printer, then you can also adjust the pitch of the text. Pitch is the number of characters which will be printed in an inch. Printing normally takes place at 10 pitch, which means that 10 characters are printed to an inch. However, you can select 8,9 or 12 pitch to give the effect of printing characters fruther apart or closer together, respectively.

Naturally, at 12 pitch more characters can be printed in a line the same physical length, than at 10 pitch. For example, 80 characters can be printed across an 8 inch page at 10 pitch, while 96 can be printed at 12 pitch, an increase of 20 percent.

If you have selected screen output, then the text will be printed on the screen with up to 84 characters in a line (any extra characters are lost).

Selecting the screen only is known as doing a test print, and allows you to see what the formatted text will look like on the printer. The text is displayed in inverse (i.e. black on white) so that it resembles a printed page. Underlining is not done in test print mode.

Note that if you have selected screen and printer output, right justification, and to print on a DIABLO printer, the text on the screen will not be right justified at all! To obtain right justification on the screen, you must select right justification without DIABLO printer, which will cause blank padding.

The message

'OUTPUT DEVICE screen S'
'OUTPUT DEVICE printer P'
'OUTPUT DEVICE both   B'

is highlighted
To do a test print on the screen, press RETURN.
To print on the printer, press P, then press RETURN.
To print on both the printer and the screen, press B, then press RETURN.

5.2.6 Pitch

Pitch is the number of characters printed per horizontal inch.

Pitch setting is only available if the Diablo option has been selected.

The standard pitch is 10 characters per inch, however 12 characters per inch is often used.

You should select a pitch setting which suits the type of document you are preparing, the type of daisy wheel used, and the width in characters as selected in group 3.

The total width printed in inches is the width parameter divided by the pitch.

5.2.7 Spacing

Spacing is the number of lines printed per vertical inch.

Spacing is only available if the Diablo option has been selected.

The usual spacing selected is 6 lines per vertical inch, however, 8 lines per inch is often used.

You should select a spacing setting which suits the type of document you are preparing, the type of daisy wheel used, and the form length in lines as selected in group 3.

The total form length in vertical inches is the form length parameter divided by the spacing.

5.3 SPECIAL CHARACTERS USED IN THE HEADING OR FOOTING

Some special symbols are allowed in the heading or footing.

The tilde character ($\sim$) is used to represent a supersoft space. This is a space which is stretched as much as possible, so that the page heading or footing occupies the full width of the print window, from the left edge to the right margin.

All supersoft spaces are stretched by the same amount, so that text separated by supersoft spaces is evenly spaced in the print window.

A single supersoft space as the first character of the heading will right justify the heading.

A pair of supersoft spaces, one placed at each end of the heading, will centre the heading. The centering can be adjusted by using ordinary spaces as well.

A single supersoft space in the middle of the heading will align the left end of the heading with the left edge, and the right end of the heading on the right margin. This is particularly useful for putting the page number on the far right of the heading.

The SO or CONTROL N character is used to switch underlining on in a heading or footing.

The SI or CONTROL O character is used to switch underlining off before the end of the heading or footing. It is switched off at the end of a paragraph automatically with a carriage return.

The character @ when followed by one of the characters listed below will be translated for each heading or footing line printed.

@T	time	e.g. 12:30 AM
@D	date	e.g. 3/8/81
@F	file name	e.g. LETTER
@P	physical page number	e.g. 6
@S	segment. subsegment	e.g. 3.8
@N	user page number	e.g. 9
@R	user page number in CAPITAL Romans	e.g. IX
@r	user page number in small Romans	e.g. ix

5.4 INTERACTIVE PRINTING

(a) once printing has started, it normally happens automatically, and without your intervention.

(b) there are several circumstances when printing requires operator action.

5.4.1 Selective Printing

For each page you must specify whether you want it printed.

The current page and segment number are displayed.

You may select one of the following options:

Y - yes, print this page.

N - no, skip to the next page.

Q - quit, stop printing altogether.

A - all, print all subsequent pages, terminating single sheet mode.

5.4.2 Selective Mailing

For each mail-merge data set you must specify whether you want a letter printed or not.

The current mail-merge data set is displayed.

You may select one of the following options:

Y - yes, print this mail-merge data set.

N - skip, to the next mail-merge data set.

Q - quit, stop printing altogether.

A - all, print all subsequent mail-merge data sets, terminating selective mailing mode.

5.4.3   Variable Mailing Parameter

If a letter has one or more variable mailing parameters,
you must enter appropriate information from the keyboard.

You may be required to type a single line, then press RETURN,
or to type several lines each terminated by a RETURN, the
last line being ended by pressing RETURN twice (depending
on which codes you embedded in the text).

A message will be displayed before the entry is required,
if you program it into the letter beforehand.

5.4.4   Embedded Command Error

If embedded commands are used and an error is detected, the bad
command is displayed and you are required to enter a correct
command. See the section on FORMATTING in this manual for a
list of embedded commands and how to use them.

The bad command may be shown as either being illegal, or
correct but with a wrong value.

If the command is bad, it may be corrected by retyping the whole
command, or entering RETURN to cancel the command.

Note that the corrected command is not entered into the file.

5.4.5   Breaking the Formatting Process

By pressing ANY key, a break condition is caused.

This has the effect of clearing any characters in the keyboard
buffer that you typed ahead, and stopping the formatting
process.

When the break message is displayed, you make several responses.
The response is entered, followed by RETURN. The default
response can be selected by just entering RETURN.

Q - quit, go to the exit menu.

C - resume continuous printing.

1 - print 1 line, then break again (like CTRL W). The default
    for the next break will be 1, so that you can step through
    the document a line at a time.

6. <u>MAILING</u>

    6.1 Merging Into Source Text

        6.1.1 System counters and strings
        6.1.2 Keyboard data
        6.1.3 Text file merging
        6.1.4 Mailing file data

    6.2 Mass Mailing

        6.2.1 Mail merge facility
        6.2.2 Mass mailing example
        6.2.3 Requirement for mass mailing

6.0 MAILING

6.1 MERGING INTO SOURCE TEXT

Text is merged into the source text by putting a merge symbol,
inside a pair of caret characters, e.g. ^2^. If the source file
does not contain a numeral immediately following the merge
section is is safe to leave off the last^, e.g. ^2.

A <u>colon</u> after a field reference indicates use of a formatting
<u>picture</u>. The picture is in the form: (number) where (number)
indicates the size of the window into which the filed is left
justified, e.g.^2:6 aligns mailing field 2 in a 6 character
window.

The length of text merged into the source can be controlled,
it may either be:

(a)   The length of the item to be merged.

(b)   A fixed length, the item to be merged being either
      truncated if it is too big, or padded with spaces if it
      is too small.

Four types of text can be merged into the source text:

-     Special system counters and strings
-     Keyboard data
-     Mailing file data
-     Text file data

6.1.1 System Counters and Strings

Field	Description
^T	implies that the time in the form HH:MM XM will be used. e.g.; 2:37 PM.
^D	implies that the date in the form DD/MM/YY will be used. e.g.; 25/2/81.
^P	is replaced by the current page number
^N	is replaced by the user page number
^#35	automatic numbering in the form 33.44.55. (See under Paragraph Numbering in this Section for full details.)

It should be noted that Time and Date should be loaded using the
FILER utility before using PRINT. (See under FILER in this
Section for full details).

6.1.2 Keyboard Data

Field	Description
^?	causes input of one line from the keyboard allows interactive mailing between keyboard and printer.
^@	causes input of multiple lines from the keyboard. Each screen line is entered with RETURN - keyboard data terminated by the RETURNs. Allows interactive mailing between keyboard and printer.
^"	display a prompt for a subsequent input request- allows interactive mailing between keyboard and printer. All text up to the next quote mark " is displayed. You MUST put in the terminating quote mark !!

6.1.3 Text File Merge

There are two ways to merge the contents of another text file into the current file.

One is to use the COMMAND @MERGE (filename) in the text. For example @MERGE:1:ADDRESS will be replaced with the contents of the file ADDRESS at print time.

The other is to load the second file during EDIT. For example while entering a file called LETTER, position the cursor at the point you wish to insert the ADDRESS file, and follow this sequence:

ESC X (exit to Edit menu)
5 (for Change default file name)
type in ADDRESS - and RETURN (You will notice that the EDIT menu now has ADDRESS as the filename).
2 (for Load ADDRESS)
Y
You will now find yourself back in EDIT with the contents of ADDRESS copied into your LETTER file at the specified position.

6.1.4 Mailing File Data

^(number) OR ^(number)^
 Use field (number) from mailing file

For example:

^99 merges filed 99 of the current mailing file data set into the text.

6.2   MASS MAILING

6.2.1   Mail Merge Facility

It is often necessary to send the same letter or letters to a large number of people. HIWRITER handles this task by the use of two text files. The first text file named in the command line should be a valid text file containing the letter or letters to be issued. The second file name should be a valid text file containing the text segments or "Fields" to be used in the letter/s. Each field is terminated by a Carriage Return.

Fields consisting of a ^character only define "Dataset" terminators. A Dataset is that collection of Fields which will be used in one, and only one, copy of the letter/s. References to the fields are made by number, the first field being 1, the twelfth 12, and so on. References can be enclosed by a pair of characters to avoid confusion if the source file contains numerals.

Empty Fields, Illegal References and Reference numbers are out of range are treated as References to the Null, or Empty Field, and are deleted from the letter/s. Reference to Field zero will always cause the name of the text file the letter/s come from to be used.

6.2.2   Mass Mailing Example

Here is an example of mass mailing.

File #1 contains:

                    128 Smithskneecaps Street
                      Hurly Burly,
                       2099
                        Ph: (02) 123-4567
                         ^D
                          Reference :^0

Dear ^1,

         It has come to our attention that your account is^2.
         As this situation has been^3, we have decided to ^4.
         We hope that this situation will^5 and that^6.

         Yours sincerely,

                        Fred Smith

File #2 contains:

Jack
always paid promptly
adhered to
extend your period of credit
be satisfactory

you will continue to do business with us
∧
Mr. Rumplestiltskin
more than $2100 overdue
continuing for over 6 months
reluctantly take legal action
not continue
you will in future be more prompt
∧

It is immediately apparent that the same letter can be used widely differing circumstances, although this example is perhaps a little strained.

6.2.3 Requirements for Mass Mailing

(a) The Mailing List file is made up of variable length lines which are interpreted as Fields, one per line. Each line is terminated by a RETURN.

(b) Datasets are sequences of fields terminated by a record containing the ∧ character only, except for the last one, which is terminated by the End-Of-File.

(c) Null (empty) lines are interpreted as Null (empty) fields.

(d) Multiple copies (if requested) are printed together, before advancing to the next Dataset.

(e) Datasets are numbered from 1 upwards.

(f) Fields are numbered from 1 upwards. Field $\emptyset$ implies that (filename) will be used as the Field value.

(g) Field references within the Source document are numbers preceded by a ∧ character.

(h) Each field reference may be followed by a picture specification. A colon after a field reference indicates use of a formatting picture. The picture is in the form: (number) where (number) indicates the size of window into the field is left justified in, e.g. ∧2:6 aligns mailing field 2 in a 6 character window.

(i) A field reference may be terminated by a character if required to separate the field reference from following text.

(j) There are several special Fields as described in Section 6.11.

7.   SPECIAL FEATURES

        7.1   Recover
        7.2   Paragraph numbering facility

              7.2.1   General Outline
              7.2.2   How to operate

        7.3   Table of content generation
        7.4   Index generation
        7.5   Automatic diplication function
        7.6   System status display (ESC T)
        7.7   User help display (ESC H)

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7.0   SPECIAL FEATURES

7.1   RECOVER

This function is for those moments when you accidentally press the Ø key in the ESC X routine, or somehow crash the EDIT program and end up at the main HIWRITER menu without saving the file. Select RECOVER, press RETURN and Y. Provided that EDIT has not been garbaged in memory, this should restart EDIT where you left off.

7.2 PARAGRAPH NUMBERING FACILITY

7.2.1 General Outline

Paragraph numbering is the facility to number sections, subsections and paragraphs automatically.

Each block of text at the same level is preceded by a numbering reference of the form (caret) (hash) (digit) (digit).

- The caret indicates a macro expansion function.
- The hash mark indicates that the function is a paragraph numbering.
- The first digit is required, and is the highest level number to be printed.
- The second digit is optional, and if omitted assumes the value of the first digit. It represents the lowest level number to be printed.
- The paragraph is printed in the form:
  99.99.99.99
  where the number of pairs of digits printed depends on the levels selected.

9 levels of numbering may be used. That is a list may contain another list, which may contain another list, etc.

The levels of the list correspond to a heirarchy. In documents, this heriarchy is usually as follows:

Chapter
Section
Subsection
Paragraph
Clause
Item in list
Item within item

Whenever such a number is printed, the value of the last level printed is incremented, and the value of all lower levels reset to zero. Any higher levels are unchanged.

There is no facility to clear the counter. However, if the highest level (1) is not used, then each time it is referenced, all the lowest levels will be reset. In order to do this without printing the highest level, the reference should be included in a @REM command. (@REM commands are not printed.)

7.2.2 How to Operate

Unlike some other systems, the numbering facility does not cause any automatic indent to occur. This gives the operator much greater control over indentation of lists, but it does mean that tabulation of lists must be carefully watched.

After typing a reference, ordinary text may follow. However, it is often desirable, when trying to create the image of a numbered block, to force all text in the paragraph to line up under the first character after the number. This can be done by embedding a control K character (AUTOMARGIN) in the text. (see section 4.8.5)

The numbering facility should be used for lists wherever possible, so that the elements in the list can be reordered, new elements inserted, and others deleted, without the necessity of changing all the numbers manually. In particular, standard paragraphs should be created with the numbering facility so that when arbitary paragraphs are included in the main body of text they are sequentially numbered.

Take great care that the levels of the number are carefully controlled, that is the level numbers used in the main body and the standard paragraphs are matched.

Also note that it is not possible to refer to the numbers of standard paragraphs, as these are not known. Paragraphs or clauses which must be referred to by number must be numbered manually.

7.3 Table of Contents Generation

A table of contents with page number references can be generated
with the use of @CT or @CONTENTS embedded commands. The
remainder of the text in these commands is printed out at the
end of the document. Headings and the formatting of the
contents is just as for ordinary text, so it is up to you
to set up the contents on a new page, create a heading and
suppress the page number (since the contents will be removed
from the end of the document and attached at the beginning).

Page number references can be included by using^P.

Examples are given below:

@CT THE FIRST CHAPTER STARTS ON PAGE (PF1)^P
This will appear in the Contents as:
THE FIRST CHAPTER STARTS ON PAGE (page number inserted
automatically and right justified).

@CT THE NEXT CHAPTER STARTS ON PAGE (PF1) ^P
This will appear in the Contents as
THE NEXT CHAPTER STARTS ON PAGE (page number inserted
automatically and right justified)

7.4   Index Generation

An index with page number references can be generated with
the use of @IX or @INDEX embedded commands.   The remainder
of the text in these commands is saved in the file INDES.PR:∅
on the SYSTEM disk.   You must PRINT INDEX.PR:∅ to get a copy.
This file is overwritten each time you print a new document
with index references.

Page number references can be included by using^P.

Examples are given below:

@IX INDEXED LINE   PAGE^P
This appears in the index as
INDEXED LINE   PAGE (page number inserted automatically)

@IX BEFORE INDEXED LINE PAGE^P
This appears in the index as
BEFORE INDEXED LINE PAGE (page number inserted automatically)

7.5 AUTOMATIC DUPLICATION FUNCTION (ESC U)

This function is for the advanced User only. It is designed
for rapid creation and editing of tables of data.

Programming is begun by entering ESC U. Subsequent operations
are then "learned" by the system. If ESC U is entered again,
then learning is terminated. 64 keystrokes is the limit
for "learning" sequences.

When CTRL U is entered the sequence of instructions previously
"learned" is executed.

A short example - if you are entering an address list where
every address is terminated by, for example, SYDNEY 2000,
you can "program" HIWRITER by entering this sequence:

ESC U RETURN SYDNEY 2000 RETURN ^RETURN ESC U

Thus once you get to the end of the second-last line of each
address you hit CTRL U. In this example it has saved you
entering 15 keystrokes for every address.

CTRL U may be used to terminate "learning" instead of ESC U.
In this case, the "learned" sequence is executed immediately.
Since the sequence contains CTRL U, when this character is
encountered in the sequence it immediately forces the sequence
to be executed again. This will continue forever, or until
the cursor tries to move off one end of the text buffer,
or the User hits any key. CTRL U will then restart this process.

7.6   System Status Display (ESC T)

The command ESC T will activate or deactivate the System
Status display, which is two lines of information displayed in
Yellow at the Bottom of the screen. The first line is a row
of "-" and "I" characters, where "I" signifies that a tab
stop is set at this position. Since this line is 80
characters wide and there are 254 tab positions, this line
represents the 80 columns from the left edge of the scrolling
window, so that if the scrolling window start figure (COL
on the next line) is not zero, then the tab line only applies
correctly to the formatted display. TEXT is the number
of characters in the edit buffer, and FREE is the size
(in characters) of the free space in the edit buffer. The
last character on the second line is "I" or "O" and is an
indication of Insert or Overwrite mode while editing.

See section 4.3 and 4.5 for details on COL, WIDTH, MARGIN and
INDENT, the current values of which are provided on the second
line.

7.7   User Help Display (ESC H)   (See 3.13 for further details.)

To help you remember the different functions available a User
Help display has been provided.

ESC H will display a menu of the topics on which Help is
available. Pressing the letter next to a topic will cause a
few lines of description to appear above the Help menu. Each
key will add another few lines. Each topic will be displayed
alternatiely in Green or Yellow for visibility. Pressing the -
key, then the letter will remove that topic's description
from the screen. Pressing the @ key will cause the Help
menu to be removed, and the system returns to edit mode,
with the topics currently selected still displayed. Editing
cannot occur while the Help menu is displayed. The current
help topics will remain on the screen until altered. To
cancel the entire Help display enter -@.

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8. FILER/UTILITIES

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8.0 FILER UTILITIES

8.1 FILER OVERVIEW

The Filer module is a powerful utility. It is a comprehensive disk analysis and control system. This utility is designed to provide a simple mechanism for the User to manage his diskettes. It should be noted that Filer is an independent system, not just part of HIWRITER, and could be used on any disk.

Detailed operating instructions appear onscreen for each option.

(a) RENAME files
(b) DELETE files
(c) FILECOPY
(d) BACKUP disks
(e) FORMAT new text data disks
(f) DOSGEN new program disks
(g) ARCHIVE listing of all text files on a disc
(h) SET DATE
(i) SET PF keys to new values   ꓤꓢꓳꓨꓰ .
(j) SETLABEL on disk
(k) SEPPRINTER type
(l) SET FORM size and formatting values
(m) CATALOG screen list of text files
(n) QUIT return to main menu

All the programs are held on your HIWRITER system disk, which must be loaded into drive 0 at all times (except during a disk BACKUP).

The HIWRITER system disk should be write-protected with a write-protect tab covering the cutout at all times, except when changing the default form size with SET FORM or changing the current printer with SET PRINT, when the tab should be removed temporarily.

In drive 1 you put a data disk. Any formatted disk with a Microsoft disk directory on it may be used. (Note that the FILER commands FORMAT, DOSGEN and BACKUP create such disks).[1]

A data disk need not contain an image of the operating system, however, it must have a disk directory.

Every data disk should have a sticky label attached to it when it is created. On this label you should write the name of the disk or some short description of its purpose. This same description should also be written onto the disc magnetically, so that the computer can read the disk label as well. This is achieved by used of the SET LABEL command of the filer.

1 HiWriter Filer on 8" double sided double density disks does not format data disks. The user must use preformatted disks. Contact HiSoft or your authorized HiSoft dealer for further information.

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(a) INSERTING TEXT

If you wish to INSERT something in the text, arrow your way
to the right place and simply type it in. The text that
was there already will simply move over to make room.

(b) DELETING TEXT

If you wish to DELETE something you have several options
but the simplest way is to use your DEL key which you have
toyed with already. Use the arrows to skip to the right spot,
and then DEL backwards. (Remember holding the DEL key down
repeats the delete until you release it again.) Because of
the fast response, you can delete this way at about 200 words
a minute - five times average typing speed in fact - which
is quite adequate.

(c) UN-DELETE - for overenthusiastic deletions

If you DELETE too far, CTRL W will restore the last character
you deleted. In fact if you hit CTRL W enough times, you
restore the entire passage you just DELETED. Isn't modern
technology wonderful?

If you accidentally hit CTRL and A at the same time (which
deletes a paragraph left of the cursor), CTRL W will also
restore this.

	Abbreviation	Full Command	Explanation
4.5.11	@P=	@ PAGENUMBER	sets the user page number
4.5.11	@RS	@ RESET	reset formatting parameters
4.5.11	@L=	@ LINE	start printing at line
4.6.1		@ FORMAT	the paragraphs separated by 1 CR are merged into 1 paragraph, with the CR. replaced by a space.
4.6.2		@ NOFORMAT	switch off automatic reformatting
4.6.3	@CT	@ CONTENTS	stuff to go in contents the remainder of the line is writter in the contents file
4.6.4	@IX	@ INDEX	entry to appear in index
4.6.5		@CHAIN:1:filename	for chaining together files
4.6.6		@MERGE:1:filename	merging a file into the middle of another file.

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CONTROL AND ESCAPE FUNCTION SUMMARY

Control Functions

CTRL-A   - delete to beginning of paragraph
CTRL-B shift ←   - move word left
CTRL-E   - move to end of text
CTRL-F shift →   - move word right
CTRL-G   - delete character right
CTRL-H DEL   - delete character left
CTRL-I   - move to next tab
CTRL-J   - justify to next tab
CTRL-K home   - delete word right
CTRL-L clr   - delete word left
CTRL-M return   - insert carriage return right
CTRL-N   - backwards tab
CTRL-O   - do/do not display RETURNs
CTRL-P   - search left for string
CTRL-Q   - search right for string
CTRL-R ins   - insert space left
CTRL-T   - top of text
CTRL-U   - execute learned sequence
CTRL-V   - delete to end of paragraph
CTRL-W   - correct backwards deletion
CTRL-X   - change/replace
CTRL-Y   - fix forwards deletion
CTRL-Z   - embed control character

Escape Functions

A n/a
B n/a
C copy block
D delete block
E n/a
F select formatted/unformatted display
G grab/move block
H help
I set/clear tabs
J set/clear right justification
K n/a
L ADJUST line cursor sits on
M ADJUST margin
N ADJUST indent
O set/clear overwrite/insert mode
P n/a
Q n/a
R restore block
S ADJUST scrolling window
T status display
U start/end learned sequence
V n/a
W ADJUST width
X exit to menu
Y n/a
Z n/a

HIWRITER FUNCTION GUIDE

CONTROL AND ESCAPE FUNCTION SUMMARY

CONTROL FUNCTIONS

CTRL A	— delete to beginning of paragraph
CTRL B shift	— move word left
CTRL E	— move to end of text
CTRL F shift	— move word right
CTRL G	— delete character right
CTRL H DEL	— delete character left
CTRL I	— move to next tab
CTRL K home	— delete word right
CTRL L clr	— delete word left
CTRL M return	— insert carriage return right
CTRL N	— backwards tab
CTRL O	— do/do not display RETURNs
CTRL P	— search left for string
CTRL Q	— search right for string
CTRL R ins	— insert space left
CTRL T	— top of text
CTRL U	— execute learned sequence
CTRL V	— delete to end of paragraph
CTRL W	— correct backwards deletion
CTRL X	— change/replace
CTRL Y	— fix forwards deletion
CTRL Z	— embed control character

ESCAPE FUNCTIONS

ESC A	n/a
ESC C	copy block
ESC D	delete block
ESC E	n/a
ESC F	select formatted/unformatted display
ESC G	grab/move block
ESC H	help
ESC I	set/clear tabs
ESC J	set/clear right justification
ESC K	n/a
ESC L	ADJUST line cursor sits on
ESC M	ADJUST margin
ESC N	ADJUST indent
ESC O	set/clear overwrite/insert mode
ESC P	n/a
ESC Q	n/a
ESC R	restore block
ESC S	ADJUST scrolling window
ESC T	status display
ESC U	start/end learned sequence
ESC V	n/a
ESC W	ADJUST width
ESC X	exit to menu
ESC Y	n/a
ESC Z	n/a

HIWRITER FUNCTION GUIDE

EMBEDDED FORMATTING AND SPECIALIZED @ COMMANDS

MANUAL REFERENCE	Abbreviation	Full Command	Explanation
4.7.1	@CN	@ CENTRE	centres text between left and right margins
4.7.2		@ REM	comment paragraph (ignored at print time)
4.5.1	@FF @FF 66	@ FORM @ FORM 16	skip to next form top set form length and skip to next form top
4.5.2.	@PG @PG 60	@ PAGE @ PAGE 60	skip to next page top set page length to skip to next page top
4.5.3	@WD 70	@ WIDTH 70	set line width 70 characters from the left hand margin
4.5.4	@MG 10 @SM	@ MARGIN 10 @ SHIFT MARGIN	set margin shift margin x character
4.5.5.	@IN	@ INDENT	set paragraph indent
4.5.6	@J+ @J—	@ JUSTIFY @ NO JUSTIFY	turn on right justification turn off right justification
4.5.7		@ PITCH	set pitch for Diablo printer
4.5.8		@ SPACING	number of lines to the inch
4.5.9	@HD @H+ @H—	@ HEADING @ DO HEADING @ NO HEADING	heading switch on heading switch off heading
4.5.10	@FT @F+ @F—	@ FOOTING @ DO FOOTING @ NO FOOTING	the footing switches on footing switch off footing
4.5.11	@BM	@ BOTTOM MARGIN	set depth of softbreak zone
4.5.11		@ WIDOW 6	ensure that the first 6 lines of a paragraph do not have a page-break in them
4.5.11	@L>	@ LINESLEFT 8	ensure that there are 8 lines left at the bottom of the page if not skip to next page
4.5.11		@ ODD	print on an odd-numbered page
4.5.11		@ EVEN	print on an even-numbered page
4.5.11	@P=	@ PAGENUMBER	sets the user page number
4.5.11	@RS	@ RESET	reset formatting parameters
4.5.11	@L=	@ LINE	start printing at line
4.6.1		@ FORMAT	the paragraphs separated by 1 CR are merged into 1 paragraph, with the CR, replaced by a space.
4.6.2		@ NOFORMAT	switch off automatic reformatting
4.6.3	@CT	@ CONTENTS	stuff to go in contents the remainder of the line is written in the contents file
4.6.4	@IX	@ INDEX	entry to appear in index
4.6.5		@CHAIN:1:filename	for chaining together files
4.6.6		@MERGE:1:filename	merging a file into the middle of another file.

HIWRITER FUNCTION GUIDE

SEARCH AND REPLACE

CTRL Q   — search right for specified string
     1.   enter GRAPH]
     2.   enter string (< 128 characters)
     3.   CTRL Q indicates end of string and automatically searches
         and stops at first occurrence.
         CTRL Q then searches for next occurrence
         CTRL P searches left for string

CTRL X   — exchange search string for specified string
     1.   search for a string
     2.   enter GRAPH]
     3.   type in replacement string (< 128 characters)
     4.   CTRL X (terminator)
     5.   to change the same string again →
         CTRL X will proceed in direction of last search.

1.   to replace the occurrence and keep searching   Y
2.   to skip and search for the next occurrence   N
3.   to search for and replace all occurrences   CTRL   Y
4.   to stop searching and replacing   CTRL   N
5.   to replace this occurrence and stop   Z

MERGING FILES

1.   position cursor on appropriate place for new file insertion
2.   ESC X
3.   [5] change default file name — enter name of file to be inserted
4.   [2] LOAD
5.   [1] re-enter EDIT

                     OR

@MERGE:1:filename. The filename selected will be merged at print time.

MASS MAILING

Select MAIL from 1st menu to activate ∧ separates records for different people
CR separates records within a person

FORMATTING

ON SCREEN FORMATTING

ESC F	— formatted display
ESC number W	— width e.g. ESC 80W — print page 80 characters wide
ESC number M	— margin e.g. ESC 10M — margin set at 10 characters wide
ESC number N	— indent e.g. ESC 5N — paragraph indent 5 characters
	left of margin.
ESC J	— right to justify
ESC S	— screen display
	(sets scrolling window when page width > 80)

EMBEDDED CONTROL CHARACTERS

Underlining:	— shows up in red
CTRL Z CTRL N	— on
CTRL Z CTRL O	— off
Bolding:	— shows dark blue
CTRL Z CTRL B	— on
CTRL Z CTRL O	— (CR) — off
CTRL Z CTRL K	— left margin position
CTRL Z CTRL E	— right margin position
CTRL Z CTRL M	— end of paragraph
CTRL Z CTRL H	— backspace and overprint
CTRL Z CTRL F	— align on margin
CTRL Z CTRL A	— soft page break
CTRL Z ←—	— pseudo hyphen
CTRL Z CTRL ↑	— superscript
CTRL Z CTRL ↓	— subscript
CTRL Z CTRL I	— suppress blank padding
CTRL Z CTRL L	— form feed (up to next page)
∼	— super soft space
–	— super hard space

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HIWRITER FUNCTION GUIDE

SEARCH AND REPLACE

CTRL Q   — search right for specified string
       1.   enter GRAPH]
       2.   enter string (< 128 characters)
       3.   CTRL Q indicates end of string and automatically searches
            and stops at first occurrence.
            CTRL Q then searches for next occurrence
            CTRL P searches left for string

CTRL X   — exchange search string for specified string
       1.   search for a string
       2.   enter GRAPH]
       3.   type in replacement string (< 128 characters)
       4.   CTRL X (terminator)
       5.   to change the same string again →
            CTRL X will proceed in direction of last search.

1.	to replace the occurrence and keep searching	Y
2.	to skip and search for the next occurrence	N
3.	to search for and replace all occurrences	CTRL Y
4.	to stop searching and replacing	CTRL N
5.	to replace this occurrence and stop	Z

MERGING FILES

1. position cursor on appropriate place for new file insertion
2. ESC X
3. [5] change default file name — enter name of file to be inserted
4. [2] LOAD
5. [1] re-enter EDIT

OR

@MERGE:1:filename. The filename selected will be merged at print time.

MASS MAILING

Select MAIL from 1st menu to activate ∧ separates records for different people
CR separates records within a person

FORMATTING

ON SCREEN FORMATTING

ESC F	— formatted display
ESC number W	— width e.g. ESC 80W — print page 80 characters wide
ESC number M	— margin e.g. ESC 10M — margin set at 10 characters wide
ESC number N	— indent e.g. ESC 5N — paragraph indent 5 characters left of margin.
ESC J	— right to justify
ESC S	— screen display (sets scrolling window when page width > 80)

EMBEDDED CONTROL CHARACTERS

Underlining:	— shows up in red
CTRL Z CTRL N	— on
CTRL Z CTRL O	— off
Bolding:	— shows dark blue
CTRL Z CTRL B	— on
CTRL Z CTRL O	— (CR) — off
CTRL Z CTRL K	— left margin position
CTRL Z CTRL E	— right margin position
CTRL Z CTRL M	— end of paragraph
CTRL Z CTRL H	— backspace and overprint
CTRL Z CTRL F	— align on margin
CTRL Z CTRL A	— soft page break
CTRL Z ←	— pseudo hyphen
CTRL Z CTRL ↑	— superscript
CTRL Z CTRL ↓	— subscript
CTRL Z CTRL I	— suppress blank padding
CTRL Z CTRL L	— form feed (up to next page)
∼	— super soft space
—	— super hard space

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HIWRITER FUNCTION GUIDE

**MANUAL
REFERENCE**

3.5

CURSOR MOVEMENT – normally an insert code

CTRL T	— move cursor to top of text
CTRL E	— move cursor to end of text
←	— move cursor to character on left
→	— move cursor to character on right
↑	— move cursor up a paragraph
↓	— move cursor down a paragraph
shift	— move cursor to word on left
shift	— move cursor to word on right

3.5.1

DELETING TEXT

DEL	— deletes one character left (deletes character before cursor)
CTRL G	— deletes right on character (deletes character under cursor)
CTRL A	— delete to start of paragraph
CTRL V	— delete to end of paragraph
HOME	— delete right one word
CLS	— delete left one word

3.12

RECOVERING TEXT (undeleting)

CTRL W	— restores a character deleted left of cursor
CTRL Y	— restores a character deleted right of cursor
RECOVER	— restart from beginning if you crash (menu operated)
	Menu operated.

3.5.4

TAB SETTING

ESC T	— displays tabs
CTRL I	— skips right to next tab
CTRL N	— skips left to next tab
ESC I	— set/clear tabs

3.13

HELP

ESC H	— calls up on screen Help Index
@	— returns to edit and erases index
—@	— erases help index and command explanation entirely Character
	— calls up relevant command explanation Character
	— erases command explanation identified by relevant character.

3.12

REPEAT FACILITY

ESC (X)	Command — where X is a number between 2 and 255
ESC =	— repeats previous command

3.9

BLOCK FUNCTIONS

Marker	— GRAPH]
	block is all text between marker and cursor
ESC O	— deletes marked block
ESC C	— copies marked block to buffer and removes marker
ESC G	— copies marked block to buffer and deletes it
ESC R	— inserts the text in buffer into the text at cursor position.

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HIWRITER FUNCTION GUIDE

**MANUAL
REFERENCE**

3.5   ## CURSOR MOVEMENT – normally an insert code

CTRL T	— move cursor to top of text
CTRL E	— move cursor to end of text
←	— move cursor to character on left
→	— move cursor to character on right
↑	— move cursor up a paragraph
↓	— move cursor down a paragraph
shift	— move cursor to word on left
shift	— move cursor to word on right

3.5.1   ## DELETING TEXT

DEL	— deletes one character left (deletes character before cursor)
CTRL G	— deletes right on character (deletes character under cursor)
CTRL A	— delete to start of paragraph
CTRL V	— delete to end of paragraph
HOME	— delete right one word
CLS	— delete left one word

3.12   ## RECOVERING TEXT (undeleting)

CTRL W	— restores a character deleted left of cursor
CTRL Y	— restores a character deleted right of cursor
RECOVER	— restart from beginning if you crash (menu operated) Menu operated.

3.5.4   ## TAB SETTING

ESC T	— displays tabs
CTRL I	— skips right to next tab
CTRL N	— skips left to next tab
ESC I	— set/clear tabs

3.13   ## HELP

ESC H	— calls up on screen Help Index
@	— returns to edit and erases index
—@	— erases help index and command explanation entirely Character
	— calls up relevant command explanation Character
	— erases command explanation identified by relevant character.

3.12   ## REPEAT FACILITY

ESC (X)	Command — where X is a number between 2 and 255
ESC =	— repeats previous command

3.9   ## BLOCK FUNCTIONS

Marker	— GRAPH] block is all text between marker and cursor
ESC O	— deletes marked block
ESC C	— copies marked block to buffer and removes marker
ESC G	— copies marked block to buffer and deletes it
ESC R	— inserts the text in buffer into the text at cursor position.

HIWRITER FUNCTION GUIDE

CONTROL AND ESCAPE FUNCTION SUMMARY

CONTROL FUNCTIONS

CTRL A	— delete to beginning of paragraph
CTRL B shift	— move word left
CTRL E	— move to end of text
CTRL F shift	— move word right
CTRL G	— delete character right
CTRL H DEL	— delete character left
CTRL I	— move to next tab
CTRL K home	— delete word right
CTRL L clr	— delete word left
CTRL M return	— insert carriage return right
CTRL N	— backwards tab
CTRL O	— do/do not display RETURNs
CTRL P	— search left for string
CTRL Q	— search right for string
CTRL R ins	— insert space left
CTRL T	— top of text
CTRL U	— execute learned sequence
CTRL V	— delete to end of paragraph
CTRL W	— correct backwards deletion
CTRL X	— change/replace
CTRL Y	— fix forwards deletion
CTRL Z	— embed control character

ESCAPE FUNCTIONS

ESC A	n/a
ESC C	copy block
ESC D	delete block
ESC E	n/a
ESC F	select formatted/unformatted display
ESC G	grab/move block
ESC H	help
ESCI	set/clear tabs
ESC J	set/clear right justification
ESC K	n/a
ESC L	ADJUST line cursor sits on
ESC M	ADJUST margin
ESC N	ADJUST indent
ESC O	set/clear overwrite/insert mode
ESC P	n/a
ESC Q	n/a
ESC R	restore block
ESC S	ADJUST scrolling window
ESC T	status display
ESC U	start/end learned sequence
ESC V	n/a
ESC W	ADJUST width
ESC X	exit to menu
ESC Y	n/a
ESC Z	n/a

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ESC Z	n/a

HIWRITER FUNCTION GUIDE

EMBEDDED FORMATTING AND SPECIALIZED @ COMMANDS

MANUAL REFERENCE	Abbreviation	Full Command	Explanation
4.7.1	@CN	@ CENTRE	centres text between left and right margins
4.7.2		@ REM	comment paragraph (ignored at print time)
4.5.1	@FF @FF 66	@ FORM @ FORM 16	skip to next form top set form length and skip to next form top
4.5.2.	@PG @PG 60	@ PAGE @ PAGE 60	skip to next page top set page length to skip to next page top
4.5.3	@WD 70	@ WIDTH 70	set line width 70 characters from the left hand margin
4.5.4	@MG 10 @SM	@ MARGIN 10 @ SHIFT MARGIN	set margin shift margin x character
4.5.5.	@IN	@ INDENT	set paragraph indent
4.5.6	@J+ @J−	@ JUSTIFY @ NO JUSTIFY	turn on right justification turn off right justification
4.5.7 4.5.8		@ PITCH @ SPACING	set pitch for Diablo printer number of lines to the inch
4.5.9	@HD @H+ @H−	@ HEADING @ DO HEADING @ NO HEADING	heading switch on heading switch off heading
4.5.10	@FT @F+ @F−	@ FOOTING @ DO FOOTING @ NO FOOTING	the footing switches on footing switch off footing
4.5.11	@BM	@ BOTTOM MARGIN	set depth of softbreak zone
4.5.11		@ WIDOW 6	ensure that the first 6 lines of a paragraph do not have a page-break in them
4.5.11	@L>	@ LINESLEFT 8	ensure that there are 8 lines left at the bottom of the page if not skip to next page
4.5.11		@ ODD	print on an odd-numbered page
4.5.11		@ EVEN	print on an even-numbered page
4.5.11	@P=	@ PAGENUMBER	sets the user page number
4.5.11	@RS	@ RESET	reset formatting parameters
4.5.11	@L=	@ LINE	start printing at line
4.6.1		@ FORMAT	the paragraphs separated by 1 CR are merged into 1 paragraph, with the CR, replaced by a space.
4.6.2		@ NOFORMAT	switch off automatic reformatting
4.6.3	@CT	@ CONTENTS	stuff to go in contents the remainder of the line is written in the contents file
4.6.4	@IX	@ INDEX	entry to appear in index
4.6.5		@CHAIN:1:filename	for chaining together files
4.6.6		@MERGE:1:filename	merging a file into the middle of another file.

HIWRITER FUNCTION GUIDE

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